Ministry of higher education
Valley institute for engineering and technology
Civil and Environmental Engineering
Department
Civil Engineering Program

Civil Engineering

Program Specification

Academic year: 2025-2026

Content

Program Specification

1. Basic Information

Program Title	**Civil Engineering**
Total number of credit hours/points of the program:	174 credit hours
Number of academic years/levels (expected program duration):	five academic years
Department (s) Participating (if any) in teaching the program:	Department of Civil and Environmental Engineering
Faculty/Institute:	Valley institute for engineering and technology
University/Academy:	Higher Valley Institute
Program majors/divisions/tracks/specialties in the final year (if any):	Civil Engineering Program
Partnerships with other parties and the nature of each (if any):	Non
Name of the program coordinator (attach the assignment decision):	Ass. Prof. Ahmed Afifi
Program Specification Approval Date:	**8/26/2025**
Council responsible for Program Specification Approval (Attach the Decision / Minutes):	Department Committee Counsel (Appendix 1)

2. Program Aims: (Brief description of the overall purpose of the program)

The program provides students with a strong foundation in engineering by offering essential knowledge, practical skills, and conceptual tools. It enables students to engage in a balanced mix of theoretical and applied learning that fosters innovation and enhances their ability to address regional energy challenges. The program also enables communication, leadership, and teamwork skills while promoting ethical and social responsibility. It equips students with modern technological competencies aligned with labor market needs. Also, it enables the students to support participation in research and community-based projects that contribute to the sustainable development goals of 2030.

3. Program Structure (Curriculum)

- **3-1 Program Components**

Requirement Category/Type	Number of Courses	Number of Credit Hours/Points	Percentage from the total number of hours/points
University Requirements	**Non**	**Non**	**Non**
Institute Requirements (if	**32 course (28**	**78 credit hours (66 chr.**	**78/174=44. 8%**

applicable)		**Compulsory+ 4 elective)**	**Compulsory+12 chr. elective)**	
Program Requirements		**37 course (34 Compulsory+3 elective)**	**96 credit hour (87 chr. Compulsory+9 chr. elective)**	**96/174 =55.17%**
Requirements of the majors/ divisions/ tracks/ specializations in the final year (if any)		**None**	**None**	**None**
Other requirements	**Field Training**	**1**	3 chr.	**3/174 = 1.7%**
	Graduation Project		**6 credit hours**	**6/174=3.44%**
	Mandatory training year	**Non**	**Non**	**Non**
	Other (to be mentioned)	**Non**	**Non**	**Non**
Total Compulsory Courses		**59 Courses**	**153 credit hours**	**153/174= 87.93%**
Elective Courses		**7 Courses**	**21credit hours**	**21/174=12.06%**
Total		**69 Courses_**	**174**	**100%**

- The program components are classified into (Institute requirements - Department core requirements- Majoring in civil engineering) and explained in detail in appendix 2.
- The program is Classified according to the relevant sector NARS 2009 requirements for the Engineering sector, as follows and shown in appendix 3.

3-2 Program courses according to the expected study plan:

Academic Level	Semester	Course Code	Course Title	Course Type (Compulsory / Elective)	Requirement Category/ Type	Number of Credit Hours / Points	Number of Weekly Hours		
							Theoretical teaching	Practical training	Tutorial
First Level (preparatory)									
الاول	خريف	PHYS 101	Classical mechanical, sound, heat	اجباري	كلية	3	2	0	2
الاول	خريف	PHYS 111	General physics laboratory (1)	اجباري	كلية	1	0	2	0
الاول	خريف	CHEM 101	General Chemistry 1 for engineers	اجباري	كلية	3	2	2	0
الاول	خريف	CHEM 111	General chemistry lab	اجباري	كلية	1	0	3	0
الاول	خريف	MATH 101	Calculus 1	اجباري	كلية	3	2	0	2
الاول	خريف	ENGR 101	Introduction to engineering	اجباري	كلية	1	0	0	0
الاول	خريف	ENGR	Engineering	اجباري	كلية	2	1	3	0

Academic Level	Semester	Course Code	Course Title	Course Type (Compulsory / Elective)	Requirement Category/ Type	Number of Credit Hours / Points	Number of Weekly Hours		
							Theoretical teaching	Practical training	Tutorial
First Level (preparatory)									
		102	Drawing & Projection						
الاول	خريف	ENGR 103	Engineering Mechanics I (Static)	اجباري	كلية	3	2	0	2
الاول	ربيع	PHYS 102	Electricity and magnetism	اجباري	كلية	3	2	0	2
الاول	ربيع	PHYS 112	General physics laboratory (2)	اجباري	كلية	1	0	2	0
الاول	ربيع	MATH 102	Calculus 2	اجباري	كلية	3	2	0	2
الاول	ربيع	CECE 101	Fundamental to computer programming	اجباري	كلية	3	2	3	0
الاول	ربيع	ENGR 105	Production engineering	اجباري	كلية	1	1	0	1
الاول	ربيع	ENGR 104	Engineering Mechanics 2 (Dynamics)	اجباري	كلية	3	2	0	2
الاول	ربيع	ENGL 101	Elementary English ^	اجباري	كلية	3	2	0	2
Second Level 2									
الثاني	خريف	ARCH 205	Building construction I	اجباري	كلية	3	2	0	2
الثاني	خريف	CVEE 204	Field Plane Surveying I	اجباري	كلية	1	0	1	1
الثاني	خريف	CVEE 203	Field Plane &Topographic Surveying	اجباري	كلية	3	2	0	2
الثاني	خريف	MATH 201	Calculus III	اجباري	كلية	3	2	0	2
الثاني	خريف	ENGR 203	Strength and Testing of Materials	اجباري	كلية	3	2	0	2
الثاني	خريف	ENGL 102	Lower intermediate English ^	اجباري	كلية	3	2	0	2
الثاني	خريف	CVEE 301	Structural analysis I	اجباري	كلية	3	2	0	2

Academic Level	Semester	Course Code	Course Title	Course Type (Compulsory / Elective)	Requirement Category/ Type	Number of Credit Hours / Points	Number of Weekly Hours		
							Theoretical teaching	Practical training	Tutorial
First Level (preparatory)									
الثاني	ربيع	CVEE 110	Civil drawing	اجباري	كلية	1	1	0	1
الثاني	ربيع	CVEE 201	Construction Material & Quality Control	اجباري	كلية	3	2	0	2
الثاني	ربيع	CVEE 202	Construction Material Lab	اجباري	تخصص	1	-	1	2
الثاني	ربيع	CVEE 302	Structural analysis II	اجباري	تخصص	3	2	0	2
الثاني	ربيع	ENGR 205	Engineering Geology (Earth Systems)	اجباري	تخصص	3	2	0	2
الثاني	ربيع	MATH 202	Differential Equations	اجباري	كلية	3	2	0	2
الثاني	ربيع	BASE 303	Engineering Economics	اجباري	كلية	3	2	0	2
Third Level 3									
الثالث	خريف	BASE xxx	Requirements (Humanities - social sciences- General cultures)	اختياري	اخري	3	2	0	0
الثالث	خريف	ENGR 204	Fundamental of Fluid Mechanics	اجباري	تخصص	3	2	0	2
الثالث	خريف	CVEE 304	Geotechnical Engineering Lab	اجباري	تخصص	1	0	1	1
الثالث	خريف	CVEE 303	Geotechnical Engineering Structures	اجباري	تخصص	3	2	0	2
الثالث	خريف	CVEE 306	Reinforced Concrete Design I	اجباري	تخصص	3	2	0	2
الثالث	خريف	CVEE 338	Engineering Surveying	اجباري	تخصص	3	2	1	1
الثالث	خريف	CVEE 328	Structural Analysis III	اجباري	تخصص	3	2	0	2
الثالث	ربيع	Math 302	Linear Algebra and	اجباري	كلية	3	2	0	2

Academic Level	Semester	Course Code	Course Title	Course Type (Compulsory / Elective)	Requirement Category/ Type	Number of Credit Hours / Points	Number of Weekly Hours		
							Theoretical teaching	Practical training	Tutorial
First Level (preparatory)									
			Matrices						
الثالث	ربيع	ENGR 302	General Mechanical &Electric Engineering	اجباري	تخصص	3	2	0	2
الثالث	ربيع	CVEE 307	Fundamentals of Hydraulic Engineering	اجباري	تخصص	3	2	0.5	1.5
الثالث	ربيع	CVEE 310	Geotechnical Engineering Design	اجباري	تخصص	3	2	0	2
الثالث	ربيع	CVEE 211	Civil Drawing II	اجباري	تخصص	1	1	0.5	0.5
الثالث	ربيع	CVEE 312	Reinforced Concrete Design II	اجباري	تخصص	3	2	0	2
الثالث	ربيع	BASE XXX	General Requirements (Humanities - social sciences- General cultures)	اختياري	اخري	3	2	0	2
Fourth Level 4									
الرابع	خريف	MATH 301	Probability & statistics	اجباري	تخصص	3	2	0	2
الرابع	خريف	CVEE 412	Design of Irrigation System	اجباري	تخصص	3	2	1.5	0.5
الرابع	خريف	CVEE 401	Advanced Foundation Engineering	اجباري	تخصص	3	2	0	2
الرابع	خريف	CVEE 101	Environmental science & Technology	اجباري	تخصص	2	1	0	2
الرابع	خريف	CVEE 405	Reinforced Concrete Design III	اجباري	تخصص	3	2	0	2
الرابع	خريف	CVEE 305	Steel Structural Design	اجباري	تخصص	3	2	0	2
الرابع	ربيع	BASE XXX	General Requirement	اختياري	اخري	3	3	0	0

Academic Level	Semester	Course Code	Course Title	Course Type (Compulsory / Elective)	Requirement Category/ Type	Number of Credit Hours / Points	Number of Weekly Hours		
							Theoretical teaching	Practical training	Tutorial
First Level (preparatory)									
			s (Humanities - social sciences- General cultures)						
الرابع	ربيع	CVEE 308	Environmental & Sanitary Engineering	اجباري	تخصص	3	2	0	2
الرابع	ربيع	CVEE 205	Transportation & Traffic Engineering	اجباري	تخصص	3	2	0	2
الرابع	ربيع	CVEE 324	Construction Materials & Quality Control II	اجباري	تخصص	3	2	0	2
الرابع	ربيع	CVEE 415	Design Reinforced Concrete IV	اجباري	تخصص	3	2	0	2
الرابع	ربيع	CVEE 404	Computer Methods in Str. Analysis & Design	اجباري	تخصص	3	2	1	1
Fifth Level 5									
الخامس	خريف	CVEE 490	Senior project 1	اجباري	تخصص	1	1	0	3
الخامس	خريف	BASE 307	Contracts, Bids & Liabilities	اجباري	تخصص	2	2	0	0
الخامس	خريف	CVEE 311	Highway Design	اجباري	تخصص	3	2	0	2
الخامس	خريف	BASE XXX	General Requirements (Humanities - social sciences- General cultures)	اختياري	اخري	3	2	0	0
الخامس	خريف	CVEE XXX	Civil Engineering program requirements	اختياري	اخري	3	2	0	2

Academic Level	Semester	Course Code	Course Title	Course Type (Compulsory / Elective)	Requirement Category/ Type	Number of Credit Hours / Points	Number of Weekly Hours		
							Theoretical teaching	Practical training	Tutorial
First Level (preparatory)									
الخامس	خريف	BASE 308	Seminar	اجباري	كلية	0	2	0	0
الخامس	خريف	CVEE 330	Advanced steel Structural Analysis	اجباري	تخصص	3	2	0	2
الخامس	ربيع	CVEE 206	Civil Engineering cost Analysis & Project management	اجباري	كلية	3	2	0	2
الخامس	ربيع	CVEE 491	Senior project II	اجباري	تخصص	2	1	0	3
الخامس	ربيع	CVEE 339	Professional Training in Civil Engineering	اجباري	تخصص	3	2	0	2
الخامس	ربيع	CVEE XXX	Civil Engineering program requirements	اختياري	اخري	3	0	4	0
الخامس	ربيع	CVEE 402	Methods& Equipment for Construction 1	اجباري	تخصص	2	1	0	2
الخامس	ربيع	BASE 309	Human Rights	اجباري	كلية	0	2	0	0
الخامس	ربيع	CVEE XXX	Civil Engineering program requirements	اختياري	اخري	3	2	0	2

Mandatory(^) and elective English Core Requirements:

- Students are required to undertake an evaluation test to determine their appropriate language proficiency level. A minimum of 6 credit hours of English language study is mandatory **(^)**. Any additional hours beyond this threshold will not be counted towards the accredited hours.

Course	Semester	Course Title	Course Type	Requirement	Number of	Number of Weekly Hours

Code			(Compulsory / Elective)	Category/ Type	Credit Hours/ Points	Theoretical teaching	Other (Tutorial)	Practical training
ENGL 101	ربيع	Elementary English (^)	اجباري	كلية	3 Credit hours	3	0	0
ENGL 102	خريف	Lower Intermediate English (^)	اجباري	كلية	3 Credit hours	3	0	0
ENGL 201		Intermediate English	اختياري	كلية	0 Credit hours	3	0	0
ENGL 202		Upper Intermediate English	اختياري	كلية	0 Credit hours	3	0	0
ENGL 301		Advanced English	اختياري	كلية	0 Credit hours	3	0	0
ENGL 302		Research Writing and Correspondence	اختياري	كلية	0 Credit hours	3	0	0

Elective courses

Elective courses of general Retirements (Humanities- social sciences-general culture)
Students must select 6 credit hours from Table (1) and 6 credit hours from Table (2), adhering to the specified elective course lists.

Table (1)

Course Code	Course Title	Course Type (Compulsory / Elective)	Requirement Category/ Type	Number of Credit Hours/ Points	Number of Weekly Hours		
					Theoretical teaching	Other (Tutorial)	Practical training
BASE 102	Development of Personal Skills	اختياري	كلية	3 Credit hours	3	0	0
BASE 302	Art of Etiquette & protocol	اختياري	كلية	3 Credit hours	3	0	0
BASE 401	Communication Skills	اختياري	كلية	3 Credit hours	3	0	0
BASE 404	Negotiation Skills	اختياري	كلية	3 Credit hours	3	0	0

Table (2)

Course Code	Course Title	Course Type (Compulsory / Elective)	Requirement Category/ Type	Number of Credit Hours/ Points	Number of Weekly Hours		
					Theoretical teaching	Other (Tutorial)	Practical training
BASE 109	Project Management Organization Development	اختياري	كلية	3 Credit hours	3	0	0
BASE 201	Principles of Business Administration	اختياري	كلية	3 Credit hours	3	0	0
BASE 202	Principles of Public Relations	اختياري	كلية	3 Credit hours	3	0	0
BASE 203	Production Management	اختياري	كلية	3 Credit hours	3	0	0
BASE 206	Society & Individual Science	اختياري	كلية	3 Credit hours	3	0	0
BASE 207	Fundamentals of Management	اختياري	كلية	3 Credit hours	3	0	0
BASE 301	Principles of Financial & Managerial Accounting	اختياري	كلية	3 Credit hours	3	0	0
BASE 305	Principles of Organizational Behavior	اختياري	كلية	3 Credit hours	3	0	0
BASE 306	Research Methods	اختياري	كلية	3 Credit hours	3	0	0
BASE 402	Feasibility Studies	اختياري	كلية	3 Credit hours	3	0	0

Elective Requirements for Civil Engineering:

Students are required to complete 9 credit hours of elective courses, selected from the department-approved list, ensuring alignment with the learning objectives of the Electrical Power Engineering program.

Course Code	Course Title	Course Type (Compulsory	Requirement Category/	Number of	Number of Weekly Hours

		/ Elective)	Type	Credit Hours/ Points	Theoretical teaching	Other (Tutorial)	Practical training
BIOL202*	Aquatic Biology	اختياري	تخصص	3 Credit hours	3	0	0
CVEE309	Techniques of planning, scheduling &Control	اختياري	تخصص	3 Credit hours	3	0	0
CVEE 321*	Water & Wastewater Treatment Engineering	اختياري	تخصص	3 Credit hours	3	0	0
CVEE 322*	Solid Waste Engineering & Management	اختياري	تخصص	3 Credit hours	3	0	0
CVEE 326#	Modeling & Simulation for Civil	اختياري	تخصص	3 Credit hours	3	0	0
CVEE 327*	Watersheds & Lands	اختياري	تخصص	3 Credit hours	3	0	0
CVEE 323*	Hazardous Waste Management	اختياري	تخصص	3 Credit hours	3	0	0
CVEE 325*	Environmental Sampling & Analysis	اختياري	تخصص	3 Credit hours	3	0	0
CVEE 329#	Advanced Structure Analysis	اختياري	تخصص	3 Credit hours	3	0	0
CVEE 331#	Repair & Strengthening of Structures	اختياري	تخصص	3 Credit hours	3	0	0
CVEE 332#	Soil Improvement	اختياري	تخصص	3 Credit hours	3	0	0
CVEE 333#	Soil & Rocks in Dry Regions	اختياري	تخصص	3 Credit hours	3	0	0
CVEE 334*	Pump Stations Engineering	اختياري	تخصص	3 Credit hours	3	0	0
CVEE 336**	Railway Engineering	اختياري	تخصص	3 Credit hours	3	0	0
CVEE 337**	Remote Sensing	اختياري	تخصص	3 Credit hours	3	0	0
CVEE 340**	Principles of Photogrammetry	اختياري	تخصص	3 Credit hours	3	0	0
CVEE 413	Prefabricated & Pre-stressed	اختياري	تخصص	3 Credit hours	3	0	0

Course Code	Course Title	Course Type (Compulsory / Elective)	Requirement Category/ Type	Number of Credit Hours/ Points	Number of Weekly Hours		
					Theoretical teaching	Other (Tutorial)	Practical training
	Concrete						
CVEE 440**	Land tenure and Cadastral Systems	اختياري	تخصص	3 Credit hours	3	0	0
CVEE 441**	Satellite Positioning	اختياري	تخصص	3 Credit hours	3	0	0
CVEE 403	Methods & Equipment for Construction II	اختياري	تخصص	1 Credit hours	1	0	0
CVEE 406	Concrete Bridge Design	اختياري	تخصص	3 Credit hours	3	0	0
CVEE 407#	Advanced Concrete Technology	اختياري	تخصص	3 Credit hours	3	0	0
CVEE 408	Soil Structure Interaction	اختياري	تخصص	3 Credit hours	3	0	0
CVEE 409*	Geotechnical Dam Engineering	اختياري	تخصص	3 Credit hours	3	0	0
CVEE 410**	Transportation & Traffic Engineering2	اختياري	تخصص	3 Credit hours	3	0	0
CVEE 411**	Airport Planning & Design	اختياري	تخصص	3 Credit hours	3	0	0
CVEE 414**	Pavement Design & Performance	اختياري	تخصص	3 Credit hours	3	0	0
CVEE 418 **	Geographic Information Systems(GIS)	اختياري	تخصص	3 Credit hours	3	0	0
CVEE 419#	Construction techniques for concrete structures	اختياري	تخصص	3 Credit hours	3	0	0
CVEE 422#	Earthquake Engineering	اختياري	تخصص	3 Credit hours	3	0	0
CVEE 426*	Modern Irrigation Systems	اختياري	تخصص	3 Credit hours	3	0	0
CVEE	Selected topics	اختياري	تخصص	1-3 Credit	1-3	0	0

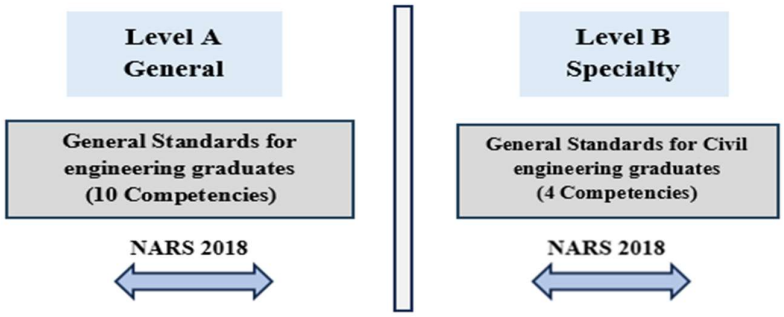
Course Code	Course Title	Course Type (Compulsory / Elective)	Requirement Category/ Type	Number of Credit Hours/ Points	Number of Weekly Hours		
					Theoretical teaching	Other (Tutorial)	Practical training
489	in Civil and Environmental Engineering			hours			
CVEE 341**	Geodesy	اختياري	تخصص	3 Credit hours	3	0	0

Minor or concentration in #Construction *Environmental & Hydraulics **Geomatic Engineering free elective (0-9 credits) or more to complete requirement credit hours or could be counted towards a minor from any course from a different concentration or major or elective.

4. Academic Standards

- **Adopted Academic Standards (NARS/ARS): NARS**

According to the National Academic Reference Standard – engineering NARS 2018 which be divided into two categories: competencies for general engineering graduates (Level A) which included 10 competencies, and specialty competencies for civil engineering (Level B) which included 4 competencies.



- **Date of Adoption of Standards in the governing Council: 10/2/2021**
- **Decision/Minutes of the governing Council is attached*(Appendix 4)**
- **Matrix between Matrix between Learning Outcomes of Civil Engineering Program & NARS2018 (Appendix 5)**

5. Matrix of National Academic Reference Standards (Program Outcomes) with Courses:

Competencies for general engineering of the institute (Level A):

A1. Identify, formulate, and solve complex engineering problems by applying engineering fundamentals, basic science and mathematics.
A2. Develop and conduct appropriate experimentation and/or simulation, analyze and interpret data, assess and evaluate findings, and use statistical analyses and objective engineering judgment to draw conclusions.
A3. Apply engineering design processes to produce cost-effective solutions that meet specified needs with consideration for global, cultural, social, economic, environmental, ethical and other aspects as appropriate to the discipline and within the principles and contexts of sustainable design and development.
A4. Utilize contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements, environmental issues and risk management principles.
A5. Practice research techniques and methods of investigation as an inherent part of learning.
A6. Plan, supervise and monitor implementation of engineering projects, taking into consideration other trades requirements.
A7. Function efficiently as an individual and as a member of multi-disciplinary and multicultural teams.
A8. Communicate effectively – graphically, verbally and in writing – with a range of audiences using contemporary tools.
A9. Use creative, innovative, and flexible thinking and acquire entrepreneurial and leadership skills to anticipate and respond to new situations.
A10. Acquire and apply new knowledge, and practice self, lifelong, and other learning strategies.

Specialty competencies for civil engineering (Level B)

B1. Select appropriate and sustainable technologies for construction of buildings, infrastructures and water structures; using either numerical techniques or physical measurements and/or testing by applying a full range of civil engineering concepts and techniques of: Structural Analysis and Mechanics, Properties and Strength of Materials, Surveying, Soil Mechanics, Hydrology and Fluid Mechanics.

B2. Achieve an optimum design of Reinforced Concrete and Steel Structures, Foundations and Earth Retaining Structures; and at least three of the following civil engineering topics: Transportation and Traffic, Roadways and Airports, Railways, Sanitary Works, Irrigation, Water Resources and Harbors; or any other emerging field relevant to the discipline.

B3. Plan and manage construction processes; address construction defects, instability and quality issues; maintain safety measures in construction and materials; and assess environmental impacts of projects.

B4. Deal with biddings, contracts and financial issues including project insurance and guarantees.

A mapping between national academic reference standards with program courses is as follow:

Compulsory Courses (Name and code)		Academic Standards (Mention code only)														
		A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	B1	B2	B3	B4	No of C
First Level (Preparatory)																
PHYS 101	Classical mechanical, sound, heat	■			■											2
PHYS 111	General physics laboratory (1)		■						■							2
CHE M 101	General Chemistry 1 for engineers	■			■				■							3
CHE	General chemistry		■						■							2

Compulsory Courses (Name and code)		Academic Standards (Mention code only)														
		A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	B1	B2	B3	B4	No of C
M 111	lab		■						■							
MAT H 101	Calculus 1	■									■					2
ENGR 101	Introduction to engineering	■			■			■			■					4
ENGR 102	Engineering Drawing and projection								■	■	■					3
ENGR 103	Engineering Mechanics 1 (statics)	■						■								2
PHYS 102	Electricity and magnetism	■									■					2
PHYS 112	General physics laboratory (2)		■		■			■								3
MAT H 102	Calculus 2	■									■					2
CECE 101	Fundamental to computer programming		■		■			■	■							4
ENGL 101	Elementary English								■		■					2
ENGR 105	Production engineering							■	■	■	■					4
ENGR 104	Engineering Mechanics II (Dynamics)	■									■					2
Second Level 2																
MAT H 201	Calculus III	■									■					2
CVEE 204	Field plane Surveying		■					■								2
CVEE 203	Field plane &Topographic Surveying											■	■			2
ARCH 205	Building Construction I					■					■					2
ENGL	Lower intermediate								■		■					2

Compulsory Courses (Name and code)		Academic Standards (Mention code only)														
		A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	B1	B2	B3	B4	No of C
102	English								■		■					
ENGR 203	Strength and testing of materials		■		■							■		■		4
CVEE 301	Structural Analysis 1	■										■				2
MAT H 202	Differential Equations	■				■										2
BASE 303	Engineering economics			■							■					2
CVEE 202	Construction Materials Lab		■		■			■								3
CVEE 201	Construction Materials &Quality Control				■							■		■		3
ENGR 205	Engineering Geology (Earth Systems)										■	■				2
CVEE 110	Civil Drawing		■						■							2
CVEE 302	Structural Analysis II	■										■				2
Third Level 3																
ENGR 204	Fundamental of Fluid Mechanics		■								■					2
Base 401	Communication skills								■	■						2
CVEE 304	Geotechnical Engineering Lab		■					■				■				3
CVEE 303	Geotechnical Engineering Structures		■									■				2
CVEE 306	Reinforced Concrete Design 1			■	■								■			3
CVEE 338	Engineering Surveying		■									■	■			3
CVEE 328	Structural Analysis III	■										■				2

Compulsory Courses (Name and code)		Academic Standards (Mention code only)														No of C
		A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	B1	B2	B3	B4	
MAH 302	Linear Algebra and Matrices	■									■					2
ENGR 302	General Mechanical &Electric Engineering	■			■											2
CVEE 307	Fundamentals of Hydraulic Engineering	■			■								■			3
CVEE 310	Geotechnical Engineering Design		■			■					■	■	■			5
CVEE 211	Civil Drawing II		■		■				■							3
CVEE 312	Reinforced Concrete Design II			■	■								■			3
BASE 306	Research methods					■					■					2
Fourth Level 4																
MAH 301	Probability & statistics	■	■			■										3
CVEE 412	Design of Irrigation System											■	■			2
CVEE 401	Advanced Foundation Engineering			■	■								■	■		4
CVEE 101	Environmental science & Technology			■	■					■				■		4
CVEE 405	Reinforced Concrete Design III			■	■								■			3
CVEE 305	Steel Structural Design			■	■								■			3
BASE 404	Negotiation skills								■	■						2
CVEE 308	Environmental & Sanitary			■								■	■	■		4

Compulsory Courses (Name and code)		Academic Standards (Mention code only)														No of C
		A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	B1	B2	B3	B4	
	Engineering			■								■	■	■		
CVEE 205	Transportation & Traffic Engineering			■								■	■			3
CVEE 324	Construction Materials & Quality Control II			■								■		■		3
CVEE 415	Design Reinforced Concrete IV				■							■	■			3
CVEE 404	Computer Methods in Str. Analysis & Design		■						■			■				3
Fifth Level 5																
CVEE 206	Civil Engineering cost Analysis & Project management						■							■	■	3
CVEE 490	Senior project 1								■		■	■	■	■	■	6
BASE 307	Contracts, Bids & Liabilities						■							■	■	3
CVEE 311	Highway Design				■							■	■			3
CVEE 402	Methods& Equipment for Construction1						■			■		■		■	■	5
BASE 308	Seminar							■	■	■						3
CVEE 330	Advanced steel Structural Analysis			■	■								■			3
BASE 309	Human Rights				■			■								2
CVEE 491	Senior project II								■		■	■	■	■	■	6
CVEE 336	Railway Engineering			■								■	■			3

Compulsory Courses (Name and code)		Academic Standards (Mention code only)														
		A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	B1	B2	B3	B4	No of C
CVEE 339	Professional Training in civil Engineering						■	■	■	■	■					5
BASE 109	project management & organization development		■				■			■				■	■	5
CVEE 422	Earthquake Engineering									■		■		■		3
	No of R	17	18	12	21	5	5	11	17	10	20	24	20	13	6	

- **A separate matrix of elective courses (if any):**

Elective Courses (Name and code)		Academic Standards (Mention code only)														
		A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	B1	B2	B3	B4	No of C
BASE 102	Development of Personal Skills	■				■					■					3
BASE 302	Art of Etiquette & protocol		■			■					■					3
BASE 401	Communication Skills								■	■						2
BASE 404	Negotiation Skills								■	■						2
BASE 201	Principles of Business Administration		■			■				■						3
BASE 202	Principles of Public Relations	■			■						■					3
BASE 203	Production Management		■				■				■					3
BASE 206	Society & Individual Science	■			■			■								3
BASE 207	Fundamentals of Management	■	■			■										3
BASE	Principles of Financial &	■	■			■										3

Elective Courses (Name and code)		Academic Standards (Mention code only)														
		A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	B1	B2	B3	B4	No of C
301	Managerial Accounting	■	■			■										
BASE 305	Principles of Organizational Behavior	■				■					■					3
BASE 306	Research Methods					■					■					2
ENGL 101	Elementary English								■		■					2
ENGL 102	Lower Intermediate English								■		■					2
ENGL 201	Intermediate English	■			■						■					3
ENGL 202	Upper Intermediate English	■				■				■				`		3
ENGL 301	Advanced English		■			■					■					3
ENGL 302	Research Writing and Correspondence	■				■				■						3
	No of R	10	6	0	4	10	1	1	4	5	11	0	0	0	0	

Elective Courses Requirements for Civil Engineering (Name and code)		Academic Standards (Mention code only)														
		A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	B1	B2	B3	B4	No of C
BIOL 202*	Aquatic Biology		■			■						■	■	■		5
CVEE 309	Techniques of planning, scheduling &Control		■			■						■	■	■		5
CVEE 321	Water & Wastewater Treatment Engineering											■	■	■		3
CVEE	Solid Waste Engineering &	■	■									■		■	■	5

Elective Courses Requirements for Civil Engineering (Name and code)		Academic Standards (Mention code only)														
		A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	B1	B2	B3	B4	No of C
322	Management	■	■									■		■	■	
CVEE 326	Modeling & Simulation for Civil	■											■		■	3
CVEE 327	Watersheds & Lands		■									■		■		3
CVEE 323	Hazardous Waste Management	■	■									■		■	■	5
CVEE 325	Environmental Sampling & Analysis			■							■		■		■	4
CVEE 329	Advanced Structure Analysis	■	■	■								■				4
CVEE 331	Repair & Strengthening of Structures									■			■	■		3
CVEE 332	Soil Improvement				■							■		■		3
CVEE 333	Soil & Rocks in Dry Regions	■			■								■		■	4
CVEE 334	Pump Stations Engineering		■									■	■			3
CVEE 336	Railway Engineering			■								■	■			3
CVEE 337	Remote Sensing	■				■							■	■		4
CVEE 340	Principles of Photogrammetry		■								■		■	■		4
CVEE 413	Prefabricated & Pre-stressed Concrete	■											■		■	3
CVEE 440	Land tenure and Cadastral Systems				■							■		■		3
CVEE 441	Satellite Positioning	■											■		■	3
CVEE 403	Methods & Equipment for Construction II		■									■		■		3
CVEE 406	Concrete Bridge Design				■							■	■			3
CVEE	Advanced Concrete												■	■	■	3

Elective Courses Requirements for Civil Engineering (Name and code)		Academic Standards (Mention code only)														
		A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	B1	B2	B3	B4	No of C
407	Technology												■	■	■	
CVEE 409	Geotechnical Dam Engineering	■										■		■	■	4
CVEE 410	Traffic Engineering		■	■		■						■				4
CVEE 411	Airport Planning & Design		■								■		■	■		4
CVEE 414	Pavement Design & Performance	■												■	■	3
CVEE 418 **	Geographic Information Systems(GIS)				■		■							■		3
CVEE 419	Construction techniques for concrete structures	■										■			■	3
CVEE 422	Earthquake Engineering									■		■		■		3
CVEE 425	Harbor Navigation & Shore Engineering	■										■	■	■		4
CVEE 426	Modern Irrigation Systems			■									■	■		3
CVEE 489	Selected topics in Civil and Environmental Engineering	■											■		■	3
CVEE 341	Geodes	■			■									■	■	4
No of R		**14**	**11**	**5**	**6**	**4**	**1**	**0**	**0**	**2**	**3**	**18**	**19**	**21**	**13**	

6. Teaching and Learning strategies/methods to achieve Program Outcomes:

1. Online / face to face lectures
2. Tutorials: sheets/ sketches
3. Projects
4. Problem solving
5. Brainstorming
6. Practical: lab

7. Discovering
8. Reports / research
9. Cooperative work
10. Presentation
11. Discussion
12. Modelling

- All the teaching and learning methods used in the program relate to the teaching and learning strategy approved by the Academic Council
- The compatibility matrix between the teaching and learning methods of the program and learning outcomes of the Program is illustrated in Appendix 6.

7. Student Assessment strategies/methods to verify and ensure students' acquisition of Program Outcomes:

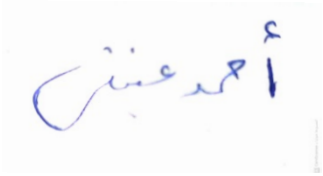
1. Quizzes
2. Mid-term exam
3. Final exam
4. sheets/ sketches
5. Projects
6. Practical: lab
7. Oral exam
8. Discussions
9. Reports/ research
10. Modelling

The compatibility matrix between the assessment strategies of the program and the competence of the Program is illustrated in Appendix 7.

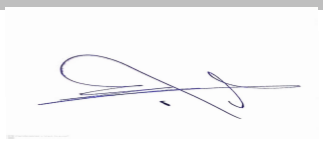
8. Program Key Performance Indicators (if any)

No.	Performance Indicator	Target Level	Method	Measurement
1.	non			
2.				
3.				

Name & Signature
Program Coordinator
Ass. Prof. Ahmed Afifi



Name & Signature
Vice Dean for Education and Student Affairs



Appendices

Appendix (1)

(Decision / Minutes of Council for Program Specification Approval)

محضر إجتماع المجلس الأكاديمي للمعهد
يوم السبت الموافق 2025/9/6

قائمة جدول الأعمال :

1. الإستهلال والترحيب بالسادة الأساتذة.
2. أستعراض ومناقشة نتيجة الفصل الدراسي الصيفي للعام الدراسي 2025/2024.
3. مناقشة الشكل الأولي للجدول الدراسي للعام 2026/2025.
4. مناقشة أعمال ومنجزات ملفات لجان الجودة بالأقسام العلمية بالمعهد.
5. أي موضوعات أخري تستجد.

تم الإجتماع يوم السبت الموافق 2025/9/6 بمقر المعهد في تمام الساعة الثانية مساءاً وبحضور كلاً من:

- أ.د/عابد محمود جاد — عميد المعهد
- أ.د/ الدسوقي عيد — عضو مجلس إدارة المعهد ورئيس لجنة التجهيزات والمعامل والمكتبة
- أ.د/ حسين حامد غز — القائم بأعمال رئيس قسم الهندسة الكهربية والاتصالات
- أ.م.د/ أحمد حنفي — الأستاذ المساعد بقسم الهندسة المعمارية
- أ.م.د/ أحمد عفيفي — الأستاذ المساعد بقسم الهندسة المدنية والبيئة
- د/ فهيمة الشاهد — القائم بأعمال رئيس قسم الهندسة المعمارية والتصميم
- د/ دعاء فتحي احمد — القائم بأعمال رئيس قسم العلوم الأساسية
- د/ نادية أحمد حسبو — المدرس بقسم الهندسة المعمارية والتصميم
- د. شريهان عادل — المدرس بقسم الهندسة المعمارية والتصميم
- د. أيهاب جعفر الصادق — المدرس بقسم الهندسة الكهربية والاتصالات
- د. أمل مصطفى الجوادي — المدرس بقسم العلوم الأساسية
- د. محمد محمد حازم — المدرس بقسم الهندسة المدنية
- د. سمر عوض عبد الحميد — المدرس بقسم الهندسة المعمارية والتصميم
- د. محمد عبد الحميد الأمين — المدرس بقسم الهندسة الكهربية والاتصالات
- د. خالد عبد العزيز الطويل — المدرس بقسم الهندسة المدنية والبيئة

ونظراً لقانونية الإجتماع فقد تم إجتماع المجلس الأكاديمي للمعهد وتناول جدول الأعمال علي النحو التالي :

1. **الإستهلال :**

قام السيد الأستاذ الدكتور عميد المعهد بالترحيب بالسادة الأساتذة الحضور، وإستعراض بنود جدول الاعمال.

2. **أستعراض ومناقشة نتيجة الفصل الدراسي الصيفي للعام الدراسي 2025/2024:**

قام أ.م.د/ أحمد حنفي محمود – رئيس الكنترول- بإستعراض وتحليل احصائية النجاح والرسوب بكافة المقررات الدراسية الأساسية والمشتركة للعام الدراسي الصيفي 2025/2024 بالأقسام العلمية المختلفة، وتم الموافقة على إعلانها للطلاب.

3. **مناقشة الشكل الأولي للجدول الدراسي للعام 2026/2025:**

أفاد أ.د / العميد بانه تم الانتهاء من وضع التصور الأولى لجدول الفصل الدراسي الأول للعام الجديد 2026/2025 وتم الاتفاق واختيار السادة الدكاترة المنتدبين وتحديد أيام حضورهم بالمعهد بعد الرجوع والتنسيق بين السادة رؤوساء الأقسام العلمية، وأنه سيتم نشره بشكله النهائي بعد مراجعته مع مجلس إدارة المعهد.

4. **مناقشة أعمال ومنجزات ملفات لجان الجودة بالأقسام العلمية بالمعهد:**

قامت السيدة د/ فهيمة الشاهد، المدير التنفيذي لوحدة ضبط الجودة باستعراض مجموعة من التقارير المعدة في لجان التعزيز والتطوير والدعم الأكاديمي ورعاية الطلاب ولجان جودة التعليم المرفوعة من مجالس البرامج للمجلس الأكاديمي، وذلك باستعراض ومناقشة تعديل ساعات بعض المقررات الدراسية، وتقارير الإنجاز السنوي للجان.

كما قامت سيادتها باستعراض ومناقشة مقترحات المشروعات البحثية المقدمة من البرامج العلمية، ومناقشة تقارير البرامج للعام الدراسي 2025/2024، تقارير مقررات العام الدراسي 2025/2024، ومناقشة توصيف البرامج للعام 2026/2025، وتوصيف مقررات العام الدراسي 2026/2025، ومناقشة تقرير الارشاد الاكاديمي للطلاب المتعثرين.

القرار:

- اعتماد التعديلات المقترحة لساعات بعض المقررات الدراسية.
- اعتماد تقارير اللانجاز السنوية للجان.
- الموافقة على خطط الأنشطة والرحلات العلمية.
- الموافقة على خطط الندوات التثقيفية والمؤتمرات.
- اعتماد خطط المشاركة المجتمعية.
- الموافقة على مقترحات المشروعات البحثية المقدمة من البرامج العلمية.
- إعتماد تقارير البرامج للعام الدراسي 2025/2024، تقارير مقررات العام الدراسي 2025/2024.
- أعتماد تقارير توصيف البرامج للعام 2026/2025، وتوصيف مقررات العام الدراسي 2026/2025.
- اعتماد تقرير الارشاد الاكاديمي للطلاب المتعثرين.

5. **مايستجد من أعمال :**

- تم مناقشة وإعتماد ندب المهندسة / أميرة عبد الله للقيام بتدريس مقرر نظم المعلومات الجغرافية وذلك لخبرتها المهنية الكبيرة في هذا المجال.

هذا وأنتهى الإجتماع الساعة الرابعة والربع مساءاً على ما تم الاتفاق عليه ،،،،

خالص تحياتي ،،،،

عميد المعهد

أ.د / عابد محمود أحمد جاد

وزارة التعليم العالي
معهد الوادي العالي للهندسة و التكنولوجيا

محضر مجلس القسم والمنعقد بالجلسة الثانى عشر يوم الثلاثاء الموافق 2025/8/26

برئاسة السيد الأستاذ الدكتور / أحمد عفيفي مصطفى - رئيس مجلس ادارة برنامج الهندسة المدنية (القائم بعمل رئيس مجلس برنامج الهندسة المدنية والبيئية) و بحضور كل من السادة الاعضاء كما يلى:

مسلسل	اسم عضو هيئة التدريس	الصفة	التوقيع
1	ا.م.د./ هانى السيد	الأستاذ المساعد بقسم الهندسة المدنية والبيئة	
2	د./ محمد حازم	المدرس بقسم الهندسة المدنية والبيئة – امين سر المجلس	
3	د./ شريهان عادل	المدرس بقسم الهندسة المعمارية والتصميم	
4	د./ دعاء فتحى	المدرس بقسم العلوم الأساسية	
5	م.م./ رفيدة الهجرسى	مدرس مساعد بقسم الهندسة المدنية والبيئة - (عن الهيئة المعاونة بالبرنامج).	
6	د /محمد عبدالرحمن	صاحب شركة الخرفى للمقاولات العمومية (ممثل عن الأطراف المجتمعية)	
7	الطالب/ عبدالرحمن نبيل	الطالب بالمستوى الرابع ببرنامج الهندسة المدنية حاليا - (عن طلاب البرنامج)	

الموضوع الأول : بشان المصادقة على المجلس السابق.
القـــــــــــرار : صادق المجلس.

الموضوع الثانى : بشان الاحاطة بالخطة الزمنية الدراسية للعام الجامعى 2026/2025 والمقدمة من السيد الاستاذ الدكتور / عميد المعهد . والمرفقة والتى تم ارسالها لاعضاء القسم.
القـــــــــــرار : احيط المجلس علما

الموضوع الثالث : بشان الموافقة على الانتداب الجزئى للسادة اعضاء هيئة التدريس للتدريس بالقسم للفصل الدراسى الاول للعام الجامعى 2026/2025

د/كريم طة	لتدريس مادة (مساحة مستوية و هندسية)

أ.د/رضا فرج	لتدريس مادة (تصميم منشات معدنية متقدمة ، تصميم منشات معدنية ، تصميم خرسانة مسلحة 3 ، تصميم خرسانة مسلحة 1)
د/محمد رباح	لتدريس مادة (تصميم الطرق السريعة ، مساحة مستوية)
د/محمد عبدالرحمن	لتدريس مادة(تحليل إنشائي3 ، تحليل إنشائي1 ، مشروع تخرج1)
د/محمود فوزى	لتدريس مادة (هندسة الأساسات المتقدمة ، ميكانيكا تربة)

القـــــــــــرار : وافق المجلس .

الموضوع الرابع : بشان الموافقة على توزيع مقررات الفصل الدراسى الاول والاعباء التدريسية للسادة اعضاء هيئة التدريس والهيئة المعاونة للعام الجامعى 2026/2025 طبقا لجدول المحاضرات.
القـــــــــــرار : وافق المجلس .

الموضوع الخامس: بشأن الاحاطة بالتقرير المرفق والذى اعده رئيس القسم وقدمه للاستاذ الدكتور/ عميد المعهد ، بشأن خطاب الوزارة لتكليف أوائل الطلبة فقد تم تكليف أوائل الدفعة م/احمد صابر ؛ م/عبدالرحمن نبيل لتعيين بالقسم.
القـــــــــــرار : احيط المجلس علما.

الموضوع السادس : بشان تقديم مقترح الجداول الدراسية التى اعدها ادارة برنامج الهندسة المدنية للعام الجامعى 2026/2025 .
القـــــــــــرار : وافق المجلس مع اعداد مذكرة بها وارسال تلك الجداول الى رئيس لجنة الجداول و ثم للعرض على المجلس الاكاديمى بالمعهد للموافقة عليها.

موضوعات الخاصة بأعمال الجودة

الموضوع الاول : مراجعة جميع تقارير مقررات العام الدراسى 2024-2025.
القـــــــــــرار : وافق المجلس على تقرير المقرارت وارسالها للمجلس الاكاديمى.

الموضوع الثانى : الانتهاء من اعداد تقرير البرنامج 2024-2025.
القـــــــــــرار : وافق المجلس على تقرير البرنامج وارسالها للمجلس الاكاديمى.

الموضوع الثالث: الانتهاء من اعداد توصيف البرنامج 2025-2026.
القـــــــــــرار : وافق المجلس على توصيف البرنامج وارسالها للمجلس الاكاديمى.

الموضوع الرابع: إعداد تقارير الأنجاز السنوي لجنة الدعم الأكاديمي ورعاية الطلاب.
القـــــــــرار : جارى إعداد تقارير الأنجاز السنوي لجنة الدعم الأكاديمي ورعاية الطلاب.

الموضوع الخامس: إعداد تقارير الأنجاز السنوي لجنة جودة المقررات.
القـــــــــرار : تم مراجعة تقارير الانجاز السنوى للجنة جودة المقررات.

الموضوع السادس : مناقشة مقترحات المشروعات البحثية المقدمة من البرنامج.
القـــــــــرار : تمت مناقشة المشروع البحثى بخصوص افضل الانظمة الانشائية لمشروع الاسكان الاجتماعى.
الموضوع السابع : مراجعة جميع توصيف مقررات العام الدراسى 2024-2025.
القـــــــــرار : وافق المجلس على توصيف المقرارت وارسالها للمجلس الاكاديمى.

أمين سر المجلس
د/ محمد حازم

رئيس مجلس إدارة برنامج الهندسة المدنية والقائم بعمل رئيس مجلس قسم الهندسة والبيئة ومنسق البرنامج
ا.م. د/ احمد عفيفي مصطفى

Appendix (2)

Taboles of requirements (Institute Requirements-Department core requirements-Majoring in Civil Engineering)

Classification according to the institute's regulations:

- For the Civil engineering program, courses are classified into the following categories as follows in table (1):

First. Institute Requirements 78 CHR

i. General Requirements (Humanities – Social Sciences – General Culture) 17CHR

A. Mandatory Credit Hours 5CHR

B. Restricted Elective Credit Hours 12CHR

ii. Basic Science Requirements (Applicable to All Majors) (18+8+4+3)33CHR

A. Mathematics Courses: 18CHR

B. Physics Courses: 8CHR

C. Chemistry Course: 4CHR

D. Computer Science Courses: 3CHR

iii. Mandatory English Language Requirements 6CHR

iv. Mandatory Engineering Requirements 22CHR

Second. Department-Specific Requirements for civil Engineering program

1. **Compulsory Departmental Requirements: 55CHR**
2. **Supplementary Compulsory Requirements 32CHR**
3. **Supplementary Compulsory Requirements 37CHR**
4. **Elective Requirements for Civil Engineering 9CHR**

Table (2): The courses classification according to the institute's regulations

First. Institute Requirements 78 CHR

- Students across various disciplines are required to successfully complete the following courses as an essential component for fulfilling graduation requirements.

i. General Requirements (Humanities – Social Sciences – General Culture) 17CHR
(=5mandatory+12Restricted Elective) **متطلبات (انسانيات - علوم اجتماعية - ثقافه عامة)**

A. Mandatory Credit Hours 5CHR

- Students must select 5 credit hours. ساعات معتمدة اجباريه

Course no.	Course Name	Credit hours	Prerequisite
BASE 303	Engineering Economics	3	Math102
BASE 307	Contracts, Bids & Liabilities	2	-
BASE 308	Seminar	0	-
BASE 309	Human Rights	0	-

B. Restricted Elective Credit Hours 12CHR

- Students must select 6 credit hours from Table (1) and 6 credit hours from Table (2), adhering to the specified elective course lists.

Table 1

Course no.	Course Name	Credit hours	Prerequisite
BASE 102	Development of Personal Skills	3	-
BASE 302	Art of Etiquette & protocol	3	-
BASE 401	Communication Skills	3	-
BASE 404	Negotiation Skills	3	-

Table 2

Course no.	Course Name	Credit hours	Prerequisite
BASE 109	Project Management Organization Development	3	-
BASE 201	Principles of Business Administration	3	-
BASE 202	Principles of Public Relations	3	-
BASE 203	Production Management	3	-
BASE 206	Society & Individual Science	3	-
BASE 207	Fundamentals of Management	3	-
BASE 301	Principles of Financial & Managerial Accounting	3	-
BASE 305	Principles of Organizational Behavior	3	-
BASE 306	Research Methods	3	-
BASE 402	Feasibility Studies	3	-

ii. Basic Science Requirements (Applicable to All Majors) 33CHR(=18Mathematics Courses+8 Physics Courses+4Chemistry Course+3Computer Science Courses) **متطلبات العلوم الاساسيه**

A. Mathematics Courses: 18CHR

- Six courses (18 credit hours) مقررات الرياضيات

Course no.	Course Name	Credit hours	Prerequisite
Math101	Calculus I	3	_
Math102	Calculus II	3	Math101 or exam
Math 201	Calculus III	3	Math102
Math 202	Differential Equations	3	Math201
Math 301	Probability & Statistics	3	Math 102
Math 302	Linear Algebra and Matrices	3	Math202

B. Physics Courses: 8CHR

- Three courses (**8** credit hours) مقررات الفيزياء

Course no.	Course Name	Credit hours	Prerequisite
Math101	Classical Mechanics, Sound, Heat	3	_
Math102	General Physics Laboratory I	3	Math101 or exam
Math 201	Electricity and Magnetism	3	Math102

Math 202	General Physics Laboratory II	3	Math201
Math 301	Waves, Optics & Atomic Physics	3	Math 102
Math 302	Optics Lab	3	Math202

C. Chemistry Course: 4CHR

- One course (**4 credit hours**)

Course no.	Course Name	Credit hours	Prerequisite
CHEM 101	General Chemistry I for Engineers	3	-
CHEM 111	General Chemistry Lab	1	Concurrent with CHEM 101

D. Computer Science Courses: 3CHR **مقررات علوم الحاسب الألى**

- The student is required to complete (3 credit hours) in Computer Science.

Course no.	Course Name	Credit hours	Prerequisite
CECE 101	Fundamental to Computer Programming	3	-

iii. Mandatory English Language Requirements 6CHR **متطلبات اجباريه لدراسة اللغة الانجليزيه**

- Students are required to undertake an evaluation test to determine their appropriate language proficiency level.
- A minimum of 6 credit hours of English language study is mandatory. Any additional hours beyond this threshold will not be counted towards the accredited hours.

Course no.	Course Name	Credit hours	Prerequisite
ENGL 101	Elementary English	3	-
ENGL 102	Lower Intermediate English	3	ENGL 101 or exam
ENGL 201	Intermediate English	3	ENGL 102
ENGL 202	Upper Intermediate English	3	ENGL 201
ENGL 301	Advanced English	3	ENGL 202
ENGL 302	Research Writing and Correspondence	3	ENGL 301

iv. Mandatory Engineering Requirements 22CHR **متطلبات اجباريه للهندسة**

Course no.	Course Name	Credit hours	Prerequisite
ENGR 101	Introduction to Engineering	1	-
ENGR 105	Production Engineering	1	-
ENGR 102	Engineering Drawing and Projection	2	-
ENGR 103	Engineering Mechanics I (Static)	3	-
ENGR 104	Engineering Mechanics II (Dynamics)	3	MATH 101, ENGR 103
ENGR 206	Strength and Testing of Materials	3	ENGR 103
ENGR 303	General Mechanical Engineering-Applied Thermodynamics	3	PHYS 102

Second. Department-Specific Requirements for Civil Engineering program 55CHR

متطلبات اجباريه لقسم الهندسة المدنية

1. Compulsory Departmental Requirements:

- Students must complete a minimum of 55 credit hours covering core topics essential to Civil engineering.

Course no.	Course Name	Credit hours	Prerequisite
CVEE 101	Environmental Science & Technology	2	-
CVEE 110	Civil Drawing	1	ENGR 102
CVEE 201	Construction Materials & Quality Control	3	ENGR 203
CVEE 202	Construction Materials Lab	1	Concurrent with CVEE 201
CVEE 203	Field Plane & Topographic Surveying	3	MATH 102
CVEE 204	Field Plane Surveying	1	Concurrent CVEE 203
CVEE 205	Transportation & Traffic Engineering	3	CVEE 201
CVEE 206	Civil Engineering Cost Analysis & Project Management	3	-
CVEE 211	Civil Drawing II	1	CVEE 210
CVEE 301	Structural Analysis I	3	ENGR 103
CVEE 302	Structural Analysis II	3	CVEE 301, ENGR 203
CVEE 328	Structural Analysis III	3	CVEE 302
CVEE 303	Geotechnical Engineering Structures	3	CVEE 307, CVEE 203
CVEE 304	Geotechnical Engineering Lab	1	Concurrent CVEE 303
CVEE 305	Steel Structure Design	3	CVEE 302
CVEE 306	Design of Reinforced Concrete DesignI	3	CVEE 301
CVEE 312	Design of Reinforced Concrete DesignII	3	CVEE 306
CVEE 307	Fundamentals of Hydraulic Engineering	3	ENGR 204
CVEE 308	Environmental & Sanitary Engineering	3	CVEE 307
CVEE 310	Geotechnical Engineering Design	3	CVEE 303
CVEE 338	Engineering Surveying	3	CVEE 203

CVEE 490	Senior Project I	1	Senior Standing
CVEE 491	Senior Project II	2	CVEE 490

2. Supplementary Compulsory Requirements 32CHR

- An additional **credit hours 32** are required to deepen specialization within the field.

متطلبات إجبارية مكملة لقسم مدنى

Course no.	Course Name	Credit hours	Prerequisite
ARCH205	Building Construction	3	-
CVEE 310	Geotechnical Enginering Design	3	CVEE303
CVEE 311	Highway Design	3	CVEE205
CVEE 324	Construction Materials & Quality Control II	3	CVEE201
CVEE 328	Structure analysis	3	CVEE 302
CVEE 330	Advanced steel Structure	3	CVEE 305
CVEE 401	Advanced Foundation Engineering	3	CVEE 310
CVEE 402	Methods & Equipment for Construction I	2	CVEE306
CVEE 404	Computer Methods in structural Analysis & Design	3	CVEE 301
CVEE 405	Design Reinforced Concrete III	3	CVEE 312
CVEE415	Design Reinforced Concrete IV	3	CVEE 405

3. Environmental Engineering and Hydraulics Engineering 37CHR

Course no.	Course Name	Credit hours	Prerequisite
BIOL201	Introduction to Environmental Microbiology	3	CHEM101,MATH201
CVEE 313	Fundamental of Environmental Engineering	3	CHEM101,CVEE201
CVEE314	Water chemistry	3	CHEM101
CVEE315	Environmental organic Chemistry	3	CVEE313
CVEE316	Environmental Enginering Design	3	CVEE314
CVEE317	Water Chemistry Lab	1	Concurrent CVEE314
CVEE318	Air polation Control&Quality Managment	3	CVEE204
CVEE319	Energy Resourses	3	CVEE313
CVEE320	Rivers, Streams & Canals	3	ENGR204
CVEE423*	Network Hydraulics	3	CVEE412
CVEE424*	Environmental Hydrology	3	CVEE307
CVEE425*	Harbor Navigation & shore Enginering	3	--
CVEE427*	Design of Irrigation Works	3	CVEE412

4. Elective Requirements for Civil Engineering 9CHR

- Students are required to complete **credit hours 9**of elective courses, selected from the department-approved list, ensuring alignment with the learning objectives of the Electrical Power Engineering program.

Course no.	Course Name	Credit hours	Prerequisite
BIOL202*	Aquatic Biology	3	CHEM101
CVEE 309	Techniques of planning, scheduling & Control	3	CVEE 206
CVEE 321	Water & Wastewater Treatment Engineering	3	CVEE 101
CVEE 322	Solid Waste Engineering & Management	3	CVEE 101
CVEE 323	Hazardous Waste Management	3	CVEE 313
CVEE 325	Environmental Sampling & Analysis	3	CVEE 313
CVEE 326	Modeling & Simulation for Civil	3	CVEE 101
CVEE 327	Watersheds & Lands	3	ENGR 204
CVEE 329	Advanced Structure Analysis	3	CVEE 328
CVEE 331	Repair & Strengthening of Structures	3	CVEE 302
CVEE 332	Soil Improvement	3	CVEE 310
CVEE 333	Soil & Rocks in Dry Regions	3	CVEE 310
CVEE 334	Pump Stations Engineering	3	-
CVEE 336	Railway Engineering	3	-
CVEE 337	Remote Sensing	3	-
CVEE 340	Principles of Photogrammetry	3	CVEE 338
CVEE 341	Geodes	3	CVEE 338
CVEE 403	Methods & Equipment for Construction II	3	CVEE 402
CVEE 406	Concrete Bridge Design	3	CVEE 306
CVEE 407	Advanced Concrete Technology	3	CVEE 324
CVEE 408	Solid Structure Interaction	3	CVEE401
CVEE 409	Geotechnical Dam Engineering	3	CVEE 303
CVEE 410	Transportation &Traffic Engineering	3	CVEE 205
CVEE 411	Airport Planning & Design	3	CVEE 205
CVEE 413	Prefabricated & Pre-stressed Concrete	3	CVEE 306
CVEE 414	Pavement Design & Performance	3	CVEE 205
CVEE 418 **	Geographic Information Systems(GIS)	3	MATH 102 CVEE 203
CVEE 419	Construction techniques for concrete structures	3	CVEE 405

CVEE 422	Earthquake Engineering	3	-
CVEE 426*-	Modern Irrigation Systems	3	CVEE 412
CVEE 440	Land tenure and Cadastral Systems	3	CVEE 341
CVEE 441	Satellite Positioning	3	CVEE 341
CVEE 489	Selected topics in Civil and Environmental Engineering	1-3	--

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Appendix (3)

Classification according to the relevant sector NARS 2009 requirements for the Engineering sector

a. Classification according to the relevant sector NARS 2009 requirements:

- For the Engineering sector, as follows and shown in table (1):

1. **Humanities and social science**
2. **Mathematics and basic sciences**
3. **Basic engineering**
4. **Applied engineering and design**
5. **Computer Applications and ICT**
6. **Project & practice**
7. **Discretionary**

Table (1): The courses classification according to the relevant sector NARS 2009 requirements

1. Humanities and social science (Hum. & Soc. Sc.) - (credit hours 16) represents 9%		
Course no.	**Course Name**	**Credit hours**
ENGL 101	Elementary English	3
ENGL 102	Lower intermediate English	3
BASE 303	Engineering Economics	3
BASE 309	Human Rights	0
BASE 401	Communication skills	3
BASE 404	negotiation skills	3
ENGR 101	introduction to Engineering	1
2. Mathematics and basic sciences (Math. & B. Sc.) - (credit hours 36) represents 21%		
Course no.	**Course Name**	**Credit hours**

Math101	Calculus I	3
Math102	Calculus II	3
Math 201	Calculus III	3
Math 202	Differential Equations	3
Math 301	probability & statistics	3
Math 302	Linear Algebra and Matrices	3
PHYS 101	Mechanics, sound, heat	3
PHYS 111	classical physics laboratory I	1
PHYS 102	Electricity and magnetism	3
PHYS112	General physics laboratory II	1
CHEM 101	General Chemistry I for engineers	3
CHEM 111	General Chemistry lab	1
ENGR 103	Engineering Mechanics I (Static)	3
ENGR 104	Engineering Mechanics II (Dynamics)	3

3. Basic engineering (B. Eng. Sc.)
- (credit hours 39) represents 22%

Course no.	Course Name	Credit hours calculated
ENGR 102	Engineering drawing and projection	2
CVEE 110	Civil drawing	1
CVEE 211	Civil drawing II	1
ENGR 105	Production Engineering	1

ENGR 203	Strength and Testing of Materials	3
ENGR 205	Geology & Geotechnical Engineering (Earth Systems)	3
ENGR 204	Fundamentals of fluid mechanics	3
ENGR 302	General Mechanical &Electrical Engineering	3
CVEE301	Structural analysis I	3
CVEE 302	Structural analysis II	3
CVEE328	Structural analysis III	3
ARCH 205	Building construction	2
CVEE204	Field Plane Surveying	1
CVEE 203	Field Plane &Topographic Surveying	3
CVEE303	Geotechnical Engineering Structures	3
CVEE304	Geotechnical Engineering lab	1
CVEE201	Construction Material & Quality Control	2
CVEE202	Construction Material Lab	1

4. Applied engineering and design (App. Eng. & Des)

- (credit hours 38) represents 22%

Course no.	Course Name	Credit hours calculated
CVEE306	Reinforced Concrete Design I	3
CVEE307	Fundamentals of Hydraulic Engineering	3
CVEE312	Reinforced Concrete Design II	3
CVEE 310	Geotechnical Engineering Design	3
CVEE405	Design Reinforced Concrete III	2
CVEE412	Design of Irrigation systems	2
CVEE401	Advanced Foundations Engineering	3
CVEE101	Environmental Science & Technology	2
CVEE 305	Steel Structure Design	2

CVEE205	Transportation & traffic Engineering	3
CVEE 308	environmental & Sanitary engineering	2
CVEE 415	Design of Reinforced Concrete IV	2
CVEE 311	Highway Design	2
CVEE 330	Advanced Steel Structure Analysis	2
CVEE 336	Railway Engineering	2
CVEE 422	Earthquake Engineering	2

5. Computer Applications and ICT
- (credit hours 16) represents 9%

Course no.	Course Name	Credit hours calculated
CECE 101	Fundamental To computer program	3
CVEE 404	Computer Methods in Structural Analysis & Design	3
CVEE 423	Network Hydraulics	3
CVEE338	Engineering survey	3
CVEE 330	Advanced Steel Structure Analysis	1
CVEE 422	Earthquake Engineering	1
BASE109	project management and organization development	2

6. Project & Practice
- (credit hours 15) represents 9%

Course no.	Course Name	Credit hours calculated
CVEE 490	Senior Project I	1
CVEE 491	Senior Project II	2
CVEE 339	Professional Training in Civil Engineering	3
ARCH 205	Building construction I	1
CVEE405	Design Reinforced Concrete III	1
CVEE 415	Design Reinforced Conrete IV	1

CVEE412	Design of Irrigation systems	1
CVEE 305	Steel Structure Design	1
CVEE 308	environmental & Sanitary engineering	1
CVEE 311	Highway Design	1
CVEE 336	Railway Engineering	1
CVEE201	Construction Material & Quality Control	1

7. Discretionary

- (credit hours 14) represents 8%

Course no.	**Course no.**	**Course no.**
BASE 307	Contracts, Bids & Liabilities	2
BASE 306	Research Methods	3
BASE 308	Seminar	0
CVEE324	Construction Materials &Quality Control II	3
CVEE 402	Methods & Equipment for Construction I	2
CVEE 206	Civil Engineering Cost Analysis & Project Management	3
BASE109	project management and organization development	1

The program duration is five years, 10 semesters. There are two study levels for preparatory year and four study levels in Civil engineering program. The following are the subjects taught during this program for each semester.

Table (2): Classical study program; two semesters per study level

1st Year/ 1st Semester												
Code	Course Name	Teaching Hours					Subject Area					
		Credit	Lectures	Exercises	Practical	Total hours	Hum. & Soc. Sc.	Math. & B. Sc.	B. Eng. Sc.	App. Eng. & Des	Comp. App. & ICT	proj. & Practice	Discretionary
PHYS 101	Classical mechanical, sound, heat	3	2	2	0	4	-	3	-	-	-	-	-
PHYS 111	General physics laboratory (1)	1	0	0	2	2	-	1	-	-	-	-	-
CHEM 101	General Chemistry 1 for engineers	3	2	2	0	4	-	3	-	-	-	-	-
CHEM 111	General chemistry lab	1	0	0	3	3	-	1	-	-	-	-	-
MATH 101	Calculus 1	3	2	2	0	4	-	3	-	-	-	-	-
ENGR 101	Introduction to engineering	1	0	0	0	0	1	-	-	-	-	-	-
ENGR 102	Engineering Drawing and projection	2	1	0	3	4	-	-	2	-	-	-	-
ENGR 103	Engineering Mechanics 1 (statics)	3	2	2	0	4	-	3	-	-	-	-	-
total		17	9	8	8	25	1	14	2	0	0	0	0
1st Year/ 2nd Semester													
Code	Course Name	Teaching Hours					Subject Area						
		Credit	Lectures	Exercises	Practical	Total hours	Hum. & Soc. Sc.	Math. & B. Sc.	B. Eng. Sc.	App. Eng. & Des	Comp. App. & ICT	proj.& Practice	Discretionary
PHYS 102	Electricity and magnetism	3	2	2	0	4	-	3	-	-	-	-	-
PHYS 112	General physics laboratory (2)	1	0	0	2	3	-	1	-	-	-	-	-
MATH 102	Calculus 2	3	2	2	0	4	-	3	-	-	-	-	-
CECE	Fundamental to	3	2	0	3	5	-	-	-	-	3	-	-

101	computer programming												
ENGR 105	Production engineering	1	1	1	0	2	-	-	1	-	-	-	-
ENGR 104	Engineering Mechanics 2 (Dynamics)	3	2	2	0	4	-	3	-	-	-	-	-
ENGL 101	Elementary English	3	2	2	0	4	3	-	-	-	-	-	-
Total		17	11	9	5	26	3	10	1	0	3	0	0

2st Year/ 1st Semester

Code	Course Name	Teaching Hours					Subject Area						
		Credit	Lectures	Exercises	Practical	Total hours	Hum. & Soc. Sc.	Math. & B. Sc.	B. Eng. Sc.	App. Eng. & Des	Comp. App. & ICT	proj.& Practice	Discretionary
ARCH 205	Building construction I	3	2	0	6	8	-	-	2	-	-	1	-
CVEE 204	Field Plane Surveying I	1	-	1	1	2	-	-	1	-	-	-	-
CVEE 203	Field Plane &Topographic Surveying	3	2	2	0	4	-	-	3	-	-	-	-
MATH 201	Calculus III	3	2	2	0	4	-	3	-	-	-	-	-
ENGR 203	Strength and Testing of Materials	3	2	2	0	4		-	3	-	-	-	-
ENGL 102	Lower intermediate English	3	2	2	0	4	3	-	-	-	-	-	-
CVEE 301	Structural analysis I	3	2	2	0	4	-	-	3	-	-	-	-
total		19	12	11	7	30	3	3	12	0	0	1	0

2st Year/ 2nd Semester

Code	Course Name	Teaching Hours					Subject Area						
		Credit	Lectures	Exercises	Practical	Total hours	Hum. & Soc. Sc.	Math. & B. Sc.	B. Eng. Sc.	App. Eng. & Des	Comp. App. & ICT	proj.& Practice	Discretionary
CVEE 110	Civil drawing	1	1	1	0	2	-	-	1	-	-	-	-

CVEE 201	Construction Material & Quality Control	3	2	2	0	4	-	-	2	-	-	1	-
CVEE 202	Construction Material Lab	1	-	1	1	2	-	-	1	-	--	-	-
CVEE 302	Structural analysis II	3	2	2	0	4	-	-	3	-	-	-	-
ENGR 205	Engineering Geology (Earth Systems)	3	2	2	0	4	-	-	3	-	-	-	-
MATH 202	Differential Equations	3	2	2	0	4	-	3	-	-	-	-	-
BASE 303	Engineering Economics	3	2	2	0	4	3	-	-	-	-	-	-
Total		17	11	12	1	24	3	3	10	0	0	1	0

3rd Year/ 1st Semester

Code	Course Name	Teaching Hours					Subject Area						
		Credit	Lectures	Exercises	Practical	Total hours	Hum. & Soc. Sc.	Math. & B. Sc.	B. Eng. Sc.	App. Eng. & Des	Comp. App. & ICT	proj.& Practice	Discretionary
BASE XXX	Elective	3	3	0	0	3	3	-	-	-	-	-	-
ENGR 204	Fundamental of Fluid Mechanics	3	2	2	0	4	-	-	3	-	-	-	-
CVEE 304	Geotechnical Engineering Lab	1	0	1	1	2	-	-	1	-	-	-	-
CVEE 303	Geotechnical Engineering Structures	3	2	2	0	4	-	-	3	-	-	-	-
CVEE 306	Reinforced Concrete Design I	3	2	2	0	4	-	-	-	3	-	-	-
CVEE 338	Engineering Surveying	3	2	1	1	4	-	-	-	-	3	-	-
CVEE 328	Structural Analysis III	3	2	2	0	4	-	-	3	-	-	-	-
total		19	13	10	2	25	3	0	10	3	3	0	0

3rd Year/ 2nd Semester

Code	Course Name	Teaching Hours					Subject Area						
		Credit	Lectures	Exercises	Practical	Total hours	Hum. & Soc. Sc.	Math. & B. Sc.	B. Eng. Sc.	App. Eng. & Des	Comp. App. & ICT	proj.& Practice	Discretionary
Math	Linear Algebra	3	2	2	0	4	-	3	-	-	-	-	-

302	and Matrices												
ENGR 302	General Mechanical &Electric Engineering	3	2	2	0	4	-	-	3	-	-	-	-
CVEE 307	Fundamentals of Hydraulic Engineering	3	2	1.5	0.5	4	-	-	-	3	-	-	-
CVEE 310	Geotechnical Engineering Design	3	2	2	0	4	-	-	-	3	-	-	-
CVEE 211	Civil Drawing II	1	1	0.5	0.5	2	-	-	1	-	-	-	-
CVEE 312	Reinforced Concrete Design II	3	2	2	0	4	-	-	-	3	-	-	-
BASE XXX	Elective	3	2	2	0	4	-	-	-	-	-	-	3
Total		**19**	**13**	**12**	**1**	**26**	**0**	**3**	**4**	**9**	**0**	**0**	**3**

4th Year/ 1st Semester

Code	Course Name	Teaching Hours					Subject Area						
		Credit	Lectures	Exercises	Practical	Total hours	Hum. & Soc. Sc.	Math. & B. Sc.	B. Eng. Sc.	App. Eng. & Des	Comp. App. & ICT	proj.& Practice	Discretionary
MATH 301	Probability & statistics	3	2	2	0	4	-	3	-	-	-	-	-
CVEE 412	Design of Irrigation System	3	2	1.5	0.5	4	-	-	-	2	-	1	-
CVEE 401	Advanced Foundation Engineering	3	2	2	0	4	-	-	-	3	-	-	-
CVEE 101	Environmental science & Technology	2	1	2	0	3	-	-	-	2	-	-	-
CVEE 405	Reinforced Concrete Design III	3	2	2	0	4	-	-	-	2	-	1	-
CVEE 305	Steel Structural Design	3	2	2	0	4	-	-	-	2	-	1	-
total		**17**	**11**	**11.5**	**0.5**	**23**	**0**	**3**	**0**	**11**	**0**	**3**	**0**

4th Year / 2nd Semester

Cod	Cour	Teaching Hours	Subject Area

		Credit	Lectures	Exercises	Practical	Total hours	Hum. & Soc. Sc.	Math. & B. Sc.	B. Eng. Sc.	App. Eng. & Des	Comp. App. & ICT	proj.& Practice	Discretionary
BASE XXX	Negotiation skills	3	3	0	0	3	3	-	-	-	-	-	-
CVEE 308	Environmental & Sanitary Engineering	3	2	2	0	4	-	-	-	2	-	1	-
CVEE 205	Transportation & Traffic Engineering	3	2	2	0	4	-	-	-	3	-	-	-
CVEE 324	Construction Materials & Quality Control II	3	2	2	0	4	-	-	-	-	-	-	3
CVEE 415	Design Reinforced Concrete IV	3	2	2	0	4	-	-	-	2	-	1	-
CVEE 404	Computer Methods in Str. Analysis & Design	3	2	1	1	4	-	-	-	-	3	-	-
Total		18	13	9	1	23	3	0	0	7	3	2	3

5th Year/ 1st Semester

Code	Course Name	Teaching Hours					Subject Area						
		Credit	Lectures	Exercises	Practical	Total hours	Hum. & Soc. Sc.	Math. & B. Sc.	B. Eng. Sc.	App. Eng. & Des	Comp. App. & ICT	proj.& Practice	Discretionary
BASE XXX	project management & organization development	3	2	2	0	4	-	-	-	-	2	-	1
CVEE 490	Senior project 1	1	1	3	0	4	-	-	-	-	-	1	-
BASE 307	Contracts, Bids & Liabilities	2	2	0	0	2	-	-	-	-	-	-	2
CVEE 311	Highway Design	3	2	2	0	4	-	-	-	2	-	1	-
CVEE XXX	Advanced concrete technology	3	2	2	0	4	-	-	-	2	-	1	-
BASE	Seminar	0	2	0	0	2	-	-	-	-	-	-	0

308													
CVEE 330	Advanced steel Structural Analysis	3	2	2	0	4	-	-	-	2	1	-	-
total		14	12	11	0	23	0	0	0	4	1	2	7
5th Year / 2nd Semester													
Code	Course Name	Teaching Hours					Subject Area						
		Credit	Lectures	Exercises	Practical	Total hours	Hum. & Soc. Sc.	Math. & B. Sc.	B. Eng. Sc.	App. Eng. & Des	Comp. App. & ICT	proj.& Practice	Discretionary
BASE 309	Human Rights	0	1	0	0	1	0	-	-	-	-	-	-
CVEE 491	Senior project II	2	1	3	0	4	-	-	-	-	-	2	-
CVEE 206	Civil Engineering cost Analysis & Project management	3	2	2	0	4	-	-	-	-	-	-	3
CVEE 339	Professional Training in civil Engineering	3	0	0	4	4	-	-	-	-	-	3	-
CVEE 402	Methods& Equipment for Construction1	2	1	2	0	3	-	-	-	-	-	-	2
CVEE 336	Railway Engineering	3	2	2	0	4	-	-	-	-	3	-	-
CVEE XXX	Earthquake Engineering	3	2	2	0	4	-	-	-	2	1	-	-
Total		17	10	11	4	25	0	0	0	4	6	6	1

- The following table shows the percentage for subject area distribution in each level in the program relevant sector NARS 2009 requirements:

Table no. (3): The percentage for subject area distribution in each level in the program

Levels	subject area						
	Hum. & Soc. Sc.	Math. & B. Sc.	B. Eng. Sc.	App. Eng. & Des	Comp. App. & ICT	Project & Practice	Discretionary
1st Year/ 1st Semester	1	14	2	0	0	0	0

1st Year/ 2nd Semester	3	10	1	0	3	0	0
2nd Year/ 1st Semester	3	3	12	0	0	1	0
2nd Year/ 2nd Semester	3	3	10	0	0	1	0
3rd Year/ 1st Semester	3	0	10	3	3	0	0
3rd Year/ 2nd Semester	0	3	4	9	0	0	3
4th Year/ 1st Semester	0	3	0	11	0	3	0
4th Year/ 2nd Semester	3	0	0	7	3	2	3
5th Year/ 1st Semester	0	0	0	4	1	2	7
5th Year/ 2nd Semester	0	0	0	4	6	6	1
Total	16	36	39	38	16	15	14
Percentage	9%	21%	22%	22%	9%	9%	8%
NARS2009 Engineering Requirements	(9-12 %)	(20-26 %)	(20-23 %)	(20-22 %)	(9-11 %)	(8-10 %)	(6-8 %)

Appendix (4)

(Minutes of Council for Adopting NARS 2018)

محضر إجتماع المجلس الأكاديمي للمعهد
يوم الأحد الموافق 2021/10/2

قائمة جدول الأعمال :

1. الإستهلال
2. متابعة توزيع أعمال المحاضرات والأنشطة للسادة أعضاء هيئة التدريس والهيئة المعاونة خلال فترة الفصل الدراسي الأول.
3. استعراض الشكل النهائي لتوزيع الجداول الدراسية للأقسام العلمية
4. مناقشة الخطة التنفيذية لتعزيز وتطوير البرامج
5. مناقشة خطة البحث العلمي لبرنامج الهندسة المعمارية والتصميم وخطة الأنشطة الطلابية للفصل الدراسي الأول.
6. متابعة أعمال ومنجزات ملف الجودة بالأقسام العلمية بالمعهد
7. ما يستجد من أعمال.

تم الإجتماع يوم الأحد الموافق 2021/10/2 بمقر المعهد في تمام الساعة الحادية عشر صباحاً وبحضور كلاً من:

- أ.د/عابد محمود جاد — عميد عهد الوادي العالي للهندسة والتكنولوجيا
- أ.د/ الدسوقي عيد — عضـــو مجلس إدارة المعهـد ورئيس لجنـة التجهيزات والمعامل والمكتبة ورئيس الكنترول
- أ.م.د/ أحمد حنفي — الأسـتاذ المسـاعد بقسـم الهندسـة المعمارية ووكيل المعهد لشئون التعليم والطلاب
- أ.م. د/ شادي السباعي — الأستاذ المساعد بقسم القوى الكهربية ووكيل المعهد لشئون البيئة وخدمة المجتمع
- د/ فهيمة الشاهد — القائم بأعمال رئيس قسم الهندسة المعمارية والتصميم
- د. إبراهيم عبد الدايم — القـائم بـأعمـال رئيس قســم هنـدســـة القوي الكهربيـة والاتصالات
- د. إيهاب نبيل — المدرس بقسم هندسة القوى الكهربية والاتصالات
- د / شريهان عادل — المدرس بقسم الهندسة المعمارية والتصميم – أمين المجلس

ونظراً لقانونية الاجتماع فقد تم إجتماع المجلس الأكاديمي للمعهد وتناول جدول لأعمال علي النحو التالي:

1. الاستهلال:

قام السـيد الأسـتاذ الدكتور عميد المعهد بالترحيب بالسـادة الحضـور وإسـتعراض بنود جدول الاعمال.

2. متابعة توزيع أعمال السادة أعضاء هيئة التدريس والهيئة المعاونة:

تم الاتفاق على استكمال النماذج المعدة لذلك الأمر خلال فترة الفصل الدراسي الأول وإرسالها للسيد العميد قبل نهاية هذا الأسبوع.

3. استعراض الشكل الأولي لتوزيع الجداول الدراسية للأقسام العلمية:

تم استعراض توزيع الساعات التدريسية على النموذج المعدل والمرسل للسادة الأساتذة رؤساء الأقسام، والاتفاق على إعادة توزيع الجداول الدراسية ليتم عمل جدول أسبوعي لكل قسم تتحقق فيه نسبة التعليم الهجين (حضوري – عن بعد) ونسبة حضور الطلبة اليومي بالمعهد.

4. مناقشة الخطة التنفيذية لتعزيز وتطوير البرامج

قامت د/ فهيمة الشاهد بمناقشة الخطة التنفيذية لتطوير برنامج الهندسة المعمارية 2026/2021. وتم استعراض حجم التمويل المتوقع للعام الدراسي 2022/2021 وفقاً للخطة التنفيذية لتعزيز وتطوير البرامج بالمعهد. وقد تم الموافقة على الخطة السنوية لتمويل البرامج ورفعها للاعتماد من مجلس إدارة المعهد.

5. مناقشة خطة البحث العلمي لبرنامج الهندسة المعمارية والتصميم وخطة الأنشطة الطلابية للفصل الدراسي الأول

قامت د. فهيمة الشاهد، مدير برنامج الهندسة المعمارية باستعراض خطة البحث العلمي للبرنامج بالإضافة إلى خطة الأنشطة الطلابية واللذان يدعمان خطة تطوير وتعزيز البرنامج. وقد قام المجلس بالموافقة على خطة البحث العلمي لبرنامج الهندسة المعمارية وكذلك خطة الأنشطة الطلابية للفصل الدراسي الأول.

1. متابعة أعمال ومنجزات ملف الجودة بالأقسام العلمية بالمعهد

قامت د. فهيمة الشاهد – المدير التنفيذي لوحدة ضمان الجودة بالمعهد، بالتعاون مع أ.د. راندا حسن مستشار التطوير بالوحدة، باستعراض مجموعة من أعمال ومنجزات ملف الجودة تمثلت في:

استعراض المعايير الأكاديمية للبرامج (NARS 2018) وفقاً لأخر اصدار لهيئة ضمان الجودة والاعتماد، وتمت الموافقة على تبنى تلك المعايير وتوجيه مديري البرامج باتخاذ ما يلزم من تطوير للبرامج للتوافق مع هذه المعايير

مناقشة التشكيل المقترح لبعض اللجان بهدف تطوير البرامج والتي تمثلت في:

- تشكيل لجنة لمراجعة وتطوير استراتيجية التعليم والتعليم.
- تشكيل لجنة التقويم والقياس بوحدة ضمان الجودة.

وقد وافق المجلس على التشكيل المقترح والتوصية برفعها للاعتماد من مجلس إدارة.

استعراض خطة تطوير المعامل الكمبيوتر كنوع من الإجراءات التصحيحية التي وردت في تقرير التدقيق للتسهيلات والموارد المادية. وتمت الموافقة على خطة التطوير ليتم اعتمادها في أقرب مجلس إدارة.

مناقشة معايير تقييم أعضاء هيئة التدريس والهيئة المعاونة، وكذلك أساليب تحفيز العاملين والتي أعدتها وحدة ضمان الجودة بهدف تحديد نقاط القوة وتعظيمها ومعالجة نقاط الضعف او القصور. وقد تم الموافقة على هذه المعايير وإخطار أعضاء هيئة التدريس والهيئة المعاونة بهذه المعايير وتوجيه مديري البرامج بإجراء التقييم في نهاية كل فصل دراسي.

استعراض التصميم المقدم من وحدة ضمان الجودة لشعار البرامج الثلاثة. وتم الاتفاق على استخدام هذه الشعارات في جميع مستندات البرامج.

2. ما يستجد من أعمال :

لا يوجد.

خالص تحياتي ،،،،

عميد المعهد

أ.د/ عابد محمود أحمد جاد

Appendix (5)

Matrix between Learning Outcomes of Civil Engineering Program & NARS2018

Learning Outcomes	NARS2018
For general Engineering Graduate (Level A)	**Competences for general Engineering Graduate (Level A)**
A0. Build and develop personality and personal skills, give awareness with general issues, concentrate on identity and bond with global, regional and country standards.	A0. Build and develop personality and personal skills, give awareness with general issues, concentrate on identity and bond with global, regional and country standards.
A1. Identify, formulate, and solve complex engineering problems by applying engineering fundamentals, basic science and mathematics.	A1. Identify, formulate, and solve complex engineering problems by applying engineering fundamentals, basic science and mathematics.
A2. Develop and conduct appropriate experimentation and/or simulation, analyze and interpret data, assess and evaluate findings, and use statistical analyses and objective engineering judgment to draw conclusions.	A2. Develop and conduct appropriate experimentation and/or simulation, analyze and interpret data, assess and evaluate findings, and use statistical analyses and objective engineering judgment to draw conclusions.
A3. Apply engineering design processes to produce cost-effective solutions that meet specified needs with consideration for global, cultural, social, economic, environmental, ethical and other aspects as appropriate to the discipline and within the principles and contexts of sustainable design and development.	A3. Apply engineering design processes to produce cost-effective solutions that meet specified needs with consideration for global, cultural, social, economic, environmental, ethical and other aspects as appropriate to the discipline and within the principles and contexts of sustainable design and development.
A4. Utilize contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements, environmental issues and risk management principles.	A4. Utilize contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements, environmental issues and risk management principles.
A5. Practice research techniques and methods of investigation as an inherent part of learning.	A5. Practice research techniques and methods of investigation as an inherent part of learning.
A6. Plan, supervise and monitor implementation of engineering projects, taking into consideration other trades requirements.	A6. Plan, supervise and monitor implementation of engineering projects, taking into consideration other trades requirements.

A7. Function efficiently as an individual and as a member of multi-disciplinary and multicultural teams.	A7. Function efficiently as an individual and as a member of multi-disciplinary and multicultural teams.
A8. Communicate effectively – graphically, verbally and in writing with a range of audiences using contemporary tools.	A8. Communicate effectively – graphically, verbally and in writing with a range of audiences using contemporary tools.
A9. Use creative, innovative and flexible thinking and acquire entrepreneurial and leadership skills to anticipate and respond to new situations.	A9. Use creative, innovative and flexible thinking and acquire entrepreneurial and leadership skills to anticipate and respond to new situations.
A10. Acquire and apply new knowledge; and practice self, lifelong and other learning strategies.	A10. Acquire and apply new knowledge; and practice self, lifelong and other learning strategies.
For Civil Engineering Graduate (Level B)	**Competences for Civil Engineering Graduate (Level B)**
B1- Select appropriate and sustainable technologies for construction of buildings, infrastructures and water structures; using either numerical techniques or physical measurements and/or testing by applying a full range of civil engineering concepts and techniques of: Structural Analysis and Mechanics, Properties and Strength of Materials, Surveying, Soil Mechanics, Hydrology and Fluid Mechanics.	B1- Select appropriate and sustainable technologies for construction of buildings, infrastructures and water structures; using either numerical techniques or physical measurements and/or testing by applying a full range of civil engineering concepts and techniques of: Structural Analysis and Mechanics, Properties and Strength of Materials, Surveying, Soil Mechanics, Hydrology and Fluid Mechanics.
B2- Achieve an optimum design of Reinforced Concrete and Steel Structures, Foundations and Earth Retaining Structures; and at least three of the following civil engineering topics: Transportation and Traffic, Roadways and Airports, Railways, Sanitary Works, Irrigation, Water Resources and Harbors; or any other emerging field relevant to the discipline.	B2- Achieve an optimum design of Reinforced Concrete and Steel Structures, Foundations and Earth Retaining Structures; and at least three of the following civil engineering topics: Transportation and Traffic, Roadways and Airports, Railways, Sanitary Works, Irrigation, Water Resources and Harbors; or any other emerging field relevant to the discipline.
B3- Plan and manage construction processes; address construction defects, instability and quality issues; maintain safety measures in construction and materials; and assess environmental impacts of projects.	B3- Plan and manage construction processes; address construction defects, instability and quality issues; maintain safety measures in construction and materials; and assess environmental impacts of projects.

B4- Deal with biddings, contracts and financial issues including project insurance and guarantees.	B4- Deal with biddings, contracts and financial issues including project insurance and guarantees.

Appendix (6)

Matrix between Teaching and Learning methods and the Program outcomes

The Teaching and Learning Method	Learning Outcome of the program													
	GENERAL										SPECIFIC			
	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	B1	B2	B3	B4
On line / face to face lectures	1	1	1	1	1	1		1	1	1	1	1	1	1
Tutorials: sheets/ sketches	1	1	1	1		1	1	1			1	1	1	1
projects		1	1	1		1	1	1	1	1		1		
Problem solving	1		1								1	1		
Brain storming	1	1	1	1					1	1	1	1	1	1
Practical: lab		1									1			
discovering		1		1						1				
Site visit			1	1		1					1	1	1	
Reports/ researches			1		1	1		1		1	1	1		
Cooperative work						1	1	1	1					
presentation											1	1		
Discussion							1	1	1			1		
modelling		1									1	1		

تم اعتماد مصفوفة المطابقة بين مخرجات التعلم للبرنامج وطرق التعليم والتعلم للبرنامج فى مجلس قسم رقم بتاريخ 29/8/2025 وتوثيقه فى مجلس اكاديمى رقم بتاريخ 2/9/2025

Appendix (7)

Matrix between the assessment methods of the program and the Program learning outcomes.

Assessment method	Learning Outcomes of the Program													
	GENERAL										SPECIFIC			
	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	B1	B2	B3	B4
quizzes	1	1	1	1	1	1					1	1	1	1
Mid-term exam	1	1	1	1	1	1					1	1	1	1
final exam	1	1	1	1	1	1					1	1	1	1
sheets /sketches	1	1	1	1	1	1					1	1	1	1
projects			1	1		1	1	1	1	1	1	1		
practical :lab		1		1			1	1			1			
oral exam	1		1	1	1			1			1	1	1	
discussions						1	1	1	1	1		1		
reports / reseaches			1		1	1			1	1	1	1		
presentation									1	1	1	1		
modelling		1						1	1		1	1		

تم اعتماد مصفوفة المطابقة بين مخرجات التعلم للبرنامج وطرق التقييم للبرنامج فى مجلس قسم بتاريخ 29/8/2025 وتوثيقه فى مجلس اكاديمى بتاريخ 2/9/2025

Appendix (8)

Matrix between program mission and the Program learning outcomes

Program Learning Outcomes	Program Mission			
	The Civil Engineering Program at the Science Valley Higher Institute of Engineering and Technology aims to prepare engineers specialized in contemporary civil engineering applications.	and aims to develop a generation capable of addressing the needs and systems of the labor market both locally and regionally.	The program contributes to the development of scientific research by linking it to community needs, serving social issues,	and supporting the achievement of the sustainable development gools.
A1. Identify, formulate, and solve complex engineering problems by applying engineering fundamentals, basic science and mathematics.	✓	✓		
A2. Develop and conduct appropriate experimentation and/or simulation, analyze and interpret data, assess and evaluate findings, and use statistical analyses and objective engineering judgment to draw conclusions.			✓	
A3. Apply engineering design processes to produce cost-				

effective solutions that meet specified needs with consideration for global, cultural, social, economic, environmental, ethical and other aspects as appropriate to the discipline and within the principles and contexts of sustainable design and development.				✓
A4. Utilize contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements, environmental issues and risk management principles.		✓		
A5. Practice research techniques and methods of investigation as an inherent part of learning.			✓	
A6. Plan, supervise and monitor implementation of engineering projects, taking into consideration other trades requirements.	✓			
A7. Function efficiently as an individual and as a member of multi-disciplinary and multicultural teams.		✓		
A8. Communicate effectively – graphically, verbally				

and in writing – with a range of audiences using contemporary tools.	✓			
A9. Use creative, innovative, and flexible thinking and acquire entrepreneurial and leadership skills to anticipate and respond to new situations.		✓		
A10. Acquire and apply new knowledge, and practice self, lifelong, and other learning strategies.	✓			
B1. Select appropriate and sustainable technologies for construction of buildings, infrastructures and water structures; using either numerical techniques or physical measurements and/or testing by applying a full range of civil engineering concepts and techniques of: Structural Analysis and Mechanics, Properties and Strength of Materials, Surveying, Soil Mechanics, Hydrology and Fluid Mechanics.				✓
B2. Achieve an optimum design of Reinforced				

Concrete and Steel Structures, Foundations and Earth Retaining Structures; and at least three of the following civil engineering topics: Transportation and Traffic, Roadways and Airports, Railways, Sanitary Works, Irrigation, Water Resources and Harbors; or any other emerging field relevant to the discipline.		✓		
B3. Plan and manage construction processes; address construction defects, instability and quality issues; maintain safety measures in construction and materials; and assess environmental impacts of projects.		✓		
B4. Deal with biddings, contracts and financial issues including project insurance and guarantees.				

Appendix (9)

Attributes of the program graduate:

The Program adopted the attributes of the Engineers of NARS 2018 to be attributes of the program alumni.

AP1. Master a wide spectrum of engineering knowledge and specialized skills and can apply acquired knowledge using theories and abstract thinking in real life situations.
AP2. Apply analytic critical and systemic thinking to identify, diagnose and solve engineering problems with a wide range of complexity and variation.
AP3. Behave professionally and adhere to engineering ethics and standards.
AP4. Work in and lead a heterogeneous team of professionals from different engineering specialties and assume responsibility for own and team performance.
AP5. Recognize his/her role in promoting the engineering field and contribute to the development of the profession and the community.
AP6. Value the importance of the environment, both physical and natural, and work to promote sustainability principles.
AP7. Use techniques, skills, and modern engineering tools necessary for engineering practice.
AP8. Assume full responsibility for own learning and self-development, engage in lifelong learning and demonstrate the capacity to engage in post- graduate and research studies.
AP9. Communicate effectively using different modes, tools and languages with various audiences; to deal with academic/professional challenges in a critical and creative manner.
AP10. Demonstrate leadership qualities, business administration and entrepreneurial skills.
AP11. Value the importance of scientific research and its rules of developing the society.

The compatibility terms between attributes of the program alumni and program mission

Appendix (10)

Matrix between program mission and attributes of the program graduate

The attributes of the program: (AP)	Program Mission			
	The Civil Engineering Program at the Science Valley Higher Institute of Engineering and Technology aims to prepare engineers specialized in contemporary civil engineering applications.	and aims to develop a generation capable of addressing the needs and systems of the labor market both locally and regionally.	The program contributes to the development of scientific research by linking it to community needs, serving social issues,	and supporting the achievement of the sustainable development gools.
AP1. Master a wide spectrum of engineering knowledge and specialized skills and can apply acquired knowledge using theories and abstract thinking in real life situations.	✓	✓		
AP2. Apply analytic critical and systemic thinking to identify, diagnose and solve engineering problems with a wide range of complexity and variation.		✓		
AP3. Behave professionally and adhere to engineering ethics and standards.				✓
AP4. Work in and lead a heterogeneous team of professionals from different engineering specialties and assume responsibility		✓		

for own and team performance.				
AP5. Recognize his/her role in promoting the engineering field and contribute to the development of the profession and the community**.**			✓	
AP6. Value the importance of the environment, both physical and natural, and work to promote sustainability principles.				✓
AP7. Use techniques, skills, and modern engineering tools necessary for engineering practice.	✓	✓		
AP8. Assume full responsibility for own learning and self-development, engage in lifelong learning and demonstrate the capacity to engage in post- graduate and research studies.			✓	
AP9. Communicate effectively using different modes, tools and languages with various audiences; to deal with academic/professional challenges in a critical and creative manner.		✓		

AP10. Demonstrate leadership qualities, business administration and entrepreneurial skills.		✓		
AP11. Value the importance of scientific research and its rules of developing the society.			✓	

The matrix between the attributes of the program alumni and the program aims as shown in table:

Table: The matrix between the program aims and the attributes of the program alumni (AP)

Program Aims	The attributes of the graduate program (AP)
The program provides students with a strong foundation in engineering by offering essential knowledge, practical skills, and conceptual tools.	**AP1.** Master a wide spectrum of engineering knowledge and specialized skills and can apply acquired knowledge using theories and abstract thinking in real life situations.
	AP8. Assume full responsibility for own learning and self-development, engage in lifelong learning, and demonstrate the capacity to engage in post-graduate and research studies.
It enables students to engage in a balanced mix of theoretical and applied learning that fosters innovation and enhances their ability to address regional energy challenges.	**AP2.** Apply analytic critical and systemic thinking to identify, diagnose and solve engineering problems with a wide range of complexity and variation.
	AP7. Use techniques, skills, and modern engineering tools necessary for engineering practice.
	AP5. Recognize his/her role in promoting the engineering field and contribute to the development of the profession and the community.
The program also enables communication, leadership, and teamwork skills while promoting ethical and social responsibility.	**AP9.** Communicate effectively using different modes, tools, and languages with various audiences; to deal with academic/professional challenges critically and creatively.
	AP3. Behave professionally and adhere to engineering ethics and standards.
	AP4. Work in and lead a heterogeneous team of professionals from different engineering specialties and assume responsibility for own and team performance.
It equips students with modern technological competencies aligned with labor market needs.	**AP1.** Master a wide spectrum of engineering knowledge and specialized skills and can apply acquired knowledge using theories and abstract thinking in real-life situations.
	AP7. Use techniques, skills, and modern engineering tools necessary for engineering practice.

	AP10. Demonstrate leadership qualities, business administration, and entrepreneurial skills.
	AP5. Recognize his/her role in promoting the engineering field and contribute to the development of the profession and the community.
	AP11. Create designs and join projects that meet the disabled needs.
Also, it enables the students to support participation in research and community-based projects that contribute to the sustainable development goals of 2030.	**AP8.** Assume full responsibility for own learning and self-development, engage in lifelong learning, and demonstrate the capacity to engage in post-graduate and research studies.
	AP2. Apply analytic critical and systemic thinking to identify, diagnose and solve engineering problems with a wide range of complexity and variation.
	AP6. Value the importance of the environment, both physical and natural, and work to promote sustainability principles.

Appendix (11)

Matrix between the program aims and the Program Learning Outcomes

The matrix between the program aims and the program learning outcomes

Program Aims	program learning outcomes																		
	GENERAL										SPECIFIC					SUB-SPECIFIC			
	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	B1	B2	B3	B4	B5	CP1	CP2	CP3	CP4
The program provides students with a strong foundation in engineering by offering essential knowledge, practical skills, and conceptual tools.	٦	٦									٦					٦			
It enables students to engage in a balanced mix of theoretical and applied learning that fosters innovation and enhances their ability to address regional energy challenges.			٦		٦		٦					٦					٦		
The program also enables communication, leadership, and teamwork skills while promoting ethical and social responsibility.							٦	٦	٦						٦			٦	
It equips students with modern technological competencies aligned with labor market needs.				٦						٦			٦	٦	٦	٦			
Also, it enables the students to support participation in research and community-based projects that contribute to the sustainable development goals of 2030.			٦		٦								٦				٦		

تم اعتماد مصفوفة المطابقة بين مخرجات التعلم للبرنامج واهداف البرنامج فى مجلس قسم بتاريخ 29/8/2025 وتوثيقه فى مجلس اكاديمى بتاريخ 2/9/2025

Appendix (12)

Matrix between the program aims and the Program Mission

Program Aims VS Program Mission

	Program Mission			
Program Aims	The Civil Engineering Program at the Science Valley Higher Institute of Engineering and Technology aims to prepare engineers specialized in contemporary civil engineering applications.	and aims to develop a generation capable of addressing the needs and systems of the labor market bot h locally and regionally.	The program contributes to the development of scientific research by linking it to community needs, serving social issues,	and supporting the achievement of the sustainable development gools.
The program provides students with a strong foundation in engineering by offering essential knowledge, practical skills, and conceptual tools.	✓			
It enables students to engage in a balanced mix of theoretical and applied learning that fosters innovation and enhances their ability to address regional energy challenges.		✓		
The program also enables			✓	

communication, leadership, and teamwork skills while promoting ethical and social responsibility.				
It equips students with modern technological competencies aligned with labor market needs.		✓		
Also, it enables the students to support participation in research and community-based projects that contribute to the sustainable development goals of 2030.			✓	✓

تم اعتماد مصفوفة المطابقة بين اهداف البرنامج و رسالة البرنامج فى مجلس قسم رقم بتاريخ 2025/8/26
وتوثيقه فى مجلس اكاديمى رقم بتاريخ 2025/9/6

Appendix (13)

Matrix between the Institute Mission and the Program Mission

Institute Mission	program Mission			
	The Civil Engineering Program at the Science Valley Higher Institute of Engineering and Technology aims to prepare engineers specialized in contemporary civil engineering applications.	and aims to develop a generation capable of addressing the needs and systems of the labor market both locally and regionally.	The program contributes to the development of scientific research by linking it to community needs, serving social issues,	and supporting the achievement of the sustainable development gools.
The Science Valley Higher Institute of Engineering and Technology is committed to achieving academic excellence and graduating engineers capable of creativity, innovation, scientific research, and continuous self-learning.	✓		✓	
The institute aims to enable its graduates to compete in the local and regional job markets, actively contribute to community development, and address contemporary challenges.		✓		
keep pace with rapid advancements to achieve the goals of sustainable development and Egypt's Vision 2030, guided by professional ethics and performance quality.			✓	✓

Appendix (14)

Regulation governing the completion of the program.

Regulation governing the completion of the program:

- The bachelor's degree program consists of four academic levels, where students progress from one level to the next upon completing a specified percentage of the program's required credit hours, as follows:

Level	Degree	Program Level Definition	Percentage of Completed Credit Hours
1	Bachelor's	Freshman (First Year)	0% – Less than 20%
2	Bachelor's	Sophomore (Second Year)	20% – Less than 40%
3	Bachelor's	Junior (Third Year)	40% – Less than 70%
4	Bachelor's	Senior (Fourth Year)	70% – Less than 100%

1. A student may register for academic courses during the main semesters—subject to the approval of the academic advisor—up to a maximum total of credit hours, as follows:
   a) Up to 21 credit hours for students with a cumulative GPA of 3.0 or higher.
   b) Up to 18 credit hours for students with a cumulative GPA of 2.0 or higher but below 3.0.
   c) Up to 14 credit hours for students with a cumulative GPA of below 2.0.
2. A student may register for academic courses during the summer semester—subject to the approval of the academic advisor—up to a maximum total of credit hours, as follows:
   a) Up to 9 credit hours for students with a cumulative GPA of 3.0 or higher.
   b) Up to 8 credit hours for students with a cumulative GPA of below 3.0.
   c) A student may enroll in one additional course beyond the aforementioned limits if it facilitates their graduation.
3. The institute has the authority to determine the courses offered each semester and the procedures for student registration. However, courses that are prerequisites for other courses or are essential for graduation must be made available for registration every semester.
4. To earn a bachelor's degree, a student must:
   a) Complete the required credit hours for the program.
   b) Achieve a minimum cumulative GPA of 2.0 at graduation.
   c) Pass all zero-credit-hour courses.
   d) Successfully complete the mandatory field training within the specified duration for their program during their study period.
5. A student may add a course:
   a) Within the first week of the main semesters.
   b) Within the first three days of the summer semester.
6. A student may drop a course:
   a) Until the end of the second week of the main semesters.
   b) Until the end of the first week of the summer semester.
7. A student may withdraw from a registered course:
   a) Within the first ten weeks of the main semesters.
   b) Within the first five weeks of the summer semester.

- Withdrawal does not result in a failing grade, provided the withdrawal request is submitted and approved within the designated period. The student will receive a "W" (Withdrawal) grade for the course, which does not affect their GPA. The withdrawn course may be retaken in subsequent semesters.

8. If a student is unable to attend the final exam for a course due to an acceptable excuse, as approved by the Department Head or Program Coordinator and the Dean of the Institute, the course will be marked as Incomplete (I).
   a) The "I" grade does not impact the student's cumulative GPA.
   b) If the student fails to take the final exam at the next available scheduled date, the "I" grade will be converted to an "F".
   c) When the student completes the missed exam, their score will be combined with their coursework grades to determine the final course grade.
9. A student may retake a course (both coursework and exam) for grade improvement, subject to the following rules:

a) The higher grades obtained will be recorded in the GPA, while the transcript will indicate that the course was retaken.
b) A student may retake up to five courses for grade improvement during their academic tenure, except for courses repeated to meet graduation requirements.
c) If the student fails a retaken course, the previous grade will be nullified, and an "F" will be recorded instead. The student must retake the course, with a maximum achievable grade of B+.

Appendix (15)

Regulation governing professional training

Regulation governing professional training:

1. Eligibility for professional training:
   a) Practical training is available to students who have successfully completed at least the second level of study (i.e., more than 60 credit hours).
   b) For female students, participation in off-campus training requires written approval from their legal guardian, along with their explicit consent regarding the training institution. If the guardian does not grant approval, the student will undergo training within the institute.
2. Duration and Training Environment
   a) The student must complete a minimum of eight weeks of field training at an industrial or service-oriented establishment relevant to their academic program.
   b) Training is conducted under the full supervision of the institute.
   c) Alternatively, training may be conducted within the institute, provided the environment simulates real-world industrial or service settings.
3. The trainee must adhere to full working hours as stipulated by the training institution.
4. Supervision, Reporting, and Evaluation
   a) Supervision Structure:
      i. Each group of trainees (not exceeding twenty students) is assigned an academic supervisor from the relevant department and a field supervisor from the training institution, whose appointment is approved by the academic department.
      ii. The academic and field supervisors coordinate to oversee student progress, monitor training activities, and assess performance.
   b) Progress Reporting & Evaluation:
      i. The academic supervisor prepares biweekly progress reports based on site visits to the training institutions.
      ii. At the end of the training period, the field supervisor submits an assessment report evaluating the students':
         - Attendance and commitment to training.
         - Ability to apply theoretical knowledge to practical scenarios.
         - Understanding technical and professional aspects of the work.
         - Teamwork skills and readiness for collaborative work.
         - Comprehension of roles, responsibilities, and work ethics.
         - Strengths and areas for improvement in both behavior and performance.
   c) Students' Technical Report:
      i. The student must submit a technical report to their academic supervisor at the end of the training period.
      ii. This report should outline:
         - The objectives achieved during training.
         - The methods used to achieve these objectives.
         - Identified weaknesses and strategies for overcoming them.
   d) Final Evaluation:
      i. The academic department evaluates the student's training performance based on reports from the academic and field supervisors.
      ii. The student's performance is graded on a Pass/Fail basis, with uniform grading criteria applied to all students receiving a Pass or Fail decision, as determined by the department.
      iii. The student's performance during the training period is assessed by both the company's training supervisor and the institute's training supervisor. This evaluation accounts for 40% of the total course grade (100 marks) and is distributed across five criteria, with 8 marks allocated per criterion, as follows:

criteria	Marks	Institute Supervisor Signature	Company Supervisor Signature
Adherence to attendance and working hours			
Professional ethics and conduct			

Response to the training program			
Acquired skills			
Integration of coursework with training			
Total Evaluation Score			

iv. At the end of the training period, the student must submit a final report, which an evaluation committee assesses. This evaluation accounts for 10% of the total course grade. The student must also undergo a public oral discussion, constituting 50% of the total course grade.

Evaluation Criteria	Marks	Evaluation Committee	Signature
Students' Submitted Report			
1-			
2-			
3-			
Public Oral Discussion			

وزارة التعليم العالي

معهد الوادى العالى للهندسة والتكنولوجيا بالقليوبية

كشف رصد الدرجات لمادة: التدريب العملي رقم المادة : CVEE 339

نهائى الفصل الدراسى الأول للعام الجامعى 2025/2024

م	رقم الطالب	اسم الطالب	تقدير جهة التدريب (40)	التقدير الاكاديمى (10)	مناقشة (50)	الاجمالى (100)	التقدير
1							
2							
3							

Appendix (16)

Program Admission Requirements

Program Admission Requirements:

- **Enrolment Requirements for Admission to the Institute**

1) At the end of each academic year, the Minister of Higher Education—following consultation with the Supreme Council for Institutes—shall determine the number of students to be admitted as regular students to the Institute. This includes both Egyptian nationals and international applicants who hold a General Secondary Education Certificate (Thanaweya Amma), or equivalent certificates whether Arab or foreign, as well as graduates of technical industrial diplomas (three-year and five-year systems), for each academic year.
2) The nomination of Egyptian students for regular enrolment at the Institute shall be carried out through the Universities Admission Coordination Office (Tansik), unless otherwise stipulated by a decision from the Minister of Higher Education. The nomination of non-Egyptian students shall be subject to the general policies established by the Ministry of Higher Education.
3) For a student to be enrolled at the Institute, the following conditions must be met:

- Possession of one of the following academic qualifications:

- General Secondary Education Certificate (Scientific – Mathematics track) or its recognized equivalent from Arab or foreign educational systems.

- Al-Azhar Secondary Education Certificate (Science stream).

- Technical Industrial Secondary School Diploma (three-year system).

- Technical Industrial Secondary School Diploma (five-year system).

- Technical Industrial Institute Diploma.

- Medical fitness: The student must pass a medical examination proving that they are free from communicable diseases and fit to pursue academic study.

- Good conduct: The student must demonstrate good character and a commendable reputation.

- Formal registration: Every applicant must complete the formal registration process at the Institute.

- Full-time study commitment: The student must be committed to full-time study at the Institute.

- **Program Enrolment Requirements**

Student distribution across the academic departments of the Institute shall follow the structure outlined in the Student Handbook, as revised in the 2023–2024 academic year. This distribution was ratified by the Academic Council in a session held on Saturday, 19 September 2023, and the revised handbook is included as an appendix.

- Students select their desired academic program according to the following procedure:

- A specialization preference form is distributed to preparatory-year students in early May, following the official announcement opening the selection period for academic specializations.

- The selection window remains open for one week, starting on a Saturday and ending the following Thursday.

- Students who do not submit their preferences within the specified period will be assigned to academic departments at the discretion of the Dean of the Institute.

- The final allocation to departments is conducted after the summer semester results are announced. The placement is based on each student's Grade Point Average (GPA) from the preparatory year and is subject to the capacity limitations of each academic department.

Appendix (17)

Grading system

Grading system:

- The total score for each course is distributed based on a weighted grading system. These grades are allocated to student activities, midterm exam scores, practical exam scores, and final exam scores.
- Students are not allowed to take the final exam for the course unless they have attended at least 75% of the total laboratory and practical session hours required for that course.
- A student enrolled in a bachelor's degree program must obtain at least a (D) grade to pass any course. The grades are used to calculate the student's cumulative GPA based on the corresponding grade points, as shown in the table below:

Degree percentage (%)	Grade	Equivalent degree	GPA
$D \geq 95$	A+	Excellent+	4.0
$90 \leq D < 95$	A	Excellent	3.7
$85 \leq D < 90$	A-	Excellent-	3.3
$80 \leq D < 85$	B+	Very good+	3.0
$75 \leq D < 80$	B	Very good	2.7
$70 \leq D < 75$	C+	Good+	2.3
$65 \leq D < 70$	C	Good	2.0
$60 \leq D < 65$	D+	Pass+	1.7
$55 \leq D < 60$	D	Pass	1.3
$50 \leq D < 55$	D-	Pass-	1.0
$D < 50$	F	fall	0

- The student's success is evaluated according to one of the following grades:
  (Excellent – Very Good – Good – Pass)

- While a student's failure is evaluated using one of the following grades:
  (Weak – Very Weak)

- The application of the above grading system shall be in accordance with the regulations specified in the institute's internal by laws. If an examination in any course includes both a written component and either an oral or practical component, the student's grade for that course shall be calculated based on the average of the written, oral, and/or practical components. A student who is absent from the written examination is considered absent from the entire course examination and shall not be assigned a grade for it. The cumulative grade upon graduation is classified as follows: Pass for a GPA from 2.0 to less than 2.5, Good for a GPA from 2.5 to less than 3.0, Very Good for a GPA from 3.0 to less than 3.5, and Excellent for a GPA from 3.5 to 4.0.