وزارة التعليم العالي
المعهد العالي للهندسة والتكنولوجيا
بدمياط الجديدة

قسم الهندسة الكيميائية

وثيقة إعتماد

برنامج "الهندسة الكيميائية"

للفصول الدراسية

لائحة الفصول الدراسية قرار رقم 1328

بتاريخ 2019/4/14

مجلس القسم العلمي لإعتماد تقارير البرنامج والمقررات

بتاريخ 2025/7/27

المجلس الأكاديمي لإعتماد تقارير البرامج والمقررات

بتاريخ 2025/7/29

مجلس إدارة المعهد لإعتماد تقارير البرنامج والمقررات

بقرار رقم (120) بتاريخ 2025/7/30

Program Coordinator	Vice Dean for Education and Student Affairs
Assoc. Prof. Dr. Hend Elsayed Gadow	Prof. Dr. Khaled Samir

Program Report
(2025)

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Academic Year 2024/2025

1. Basic Information

Program Title (according to the graduation transcript for this academic year):	Chemical Engineering Program
Total number of credit hours/points of the program:	269
Total Number of Courses:	66
Number of academic years/levels (duration required to obtain the qualification):	Five years
Department (s) (if any) that participated in teaching the program:	Basic Science and Engineering Department
Institute:	The Higher Institute of Engineering and Technology in New Damietta
University:	Ministry of Higher Education & Scientific Research
Program majors/divisions/tracks/specialties in the final year (if any):	-
Partnerships with other parties and the nature of each (if any):	-
Name of Program Coordinator:	Assoc. prof. Hend Elsayed Gadow
Date of review and approval of program and courses' reports by the Quality Assurance Unit:	28/7/2025
Council responsible for Program Report Approval (Attach the Decision / Minutes):	Scientific council
Program Report Approval Date:	29/7/2025

2. Data and Statistics

Program Instructors (on duty for the reporting year)			
Number of Staff members		**Number of Teaching assistants**	
13.5		**14**	
Full-time (at least 4 working days)	**Part-time (1 or 2 days)**	**Full-time (at least 4 working days)**	**Part-time (1 or 2 days)**
5	**17[3 from external university+14 (Delegation from other institute departments).**	**6**	**16 Delegation from other institute departments**
Ratio to number of students(13.5:198)		**Ratio to number of students(14:198)**	
1:14.67		**1:14.14**	

Brief comment on the comparison with the numbers and ratios of the previous academic year:

Academic Year 2022-2023:

- Staff members / Students ratio: 1:30
  This means for every 1 staff member, there are 30 students.
- Assistants / Students ratio: 1:32
  This means for every 1 assistant, there are 32 students.

Academic Year 2023-2024:

- Staff members / Students ratio: 1:26.8
  This indicates an increase in staffing levels, with 1 staff member handling approximately 26.8 students.
- Assistants / Students ratio: 1:20.6
  This also shows a significant increase in assistants per student.

Summary of the comparison:

- Staff ratio improvement: The staff-to-student ratio improved from 1:30 to 1:26.8, meaning there are more staff members per student in 2023-2024.
- Assistants ratio improvement: The assistants-to-student ratio improved from 1:32 to 1:20.6, indicating a higher number of assistants per student in 2023-2024.
- In 2024-2025 both staff-to-student ratio and Assistants ratio were improved.

This suggests an increased staffing and support effort in the 2023-2024 academic year, likely aimed at improving student support and education quality.

Notes: Number of staff members is (5 chemical Engineering full time + 3 part time + 2.17 placement rate from the Basic Sciences department).

Number of Teaching assistants is 7 full time + 4.25 placement rate from the Basic Sciences department.

Students	
Total number of students enrolled in all levels/years of the program in the reporting academic year:	198
Number of students enrolled/accepted in the first level of the program in the reporting academic year	32
Number of students (graduates) who completed the program for the reporting academic year:	52

Distribution of program graduates' grades (depending on the total cumulative)

Grade	Excellent	Very good	good	pass
Number of students	**4**	**22**	**24**	**2**
Percentage	**7.7%**	**42.3%**	**46.2%**	**3.8%**

Brief comment on the procedures and places of field training in which students were trained during the reporting academic year (if any):

- In January, February, and March, over 6 companies and institutions in Damietta, Port Said, and Mansoura have been contacted for field training. Agreements have been made with 4 companies (KAPCI Paints Company – Grand Fish Feed Manufacturing Plant – Damietta Drinking Water Company – Shoman Plastic Factory) for required specializations. The institute plans to train students for summer 2024 .
- During April, May, and June, the institute announced the companies available for student training along with their requirements. Students expressed interest, and based on their preferences and qualifications, they were assigned to the companies. The names of the selected students were shared in the official group. Additionally, the institute sent the companies lists of selected students along with proof of enrollment certificates for each student.
- In July, academic supervisors were assigned to monitor student field training at each company according to their specialization. Coordination with companies ensured attendance and training schedules were followed. The training began as planned, allowing the institute to finalize the students' academic results since field training is considered part of their coursework.
- **In August, September, and October, the following steps took place:**

1. The training period for all students at the companies was completed.
2. The evaluations for each student were received (Field supervisor evaluation and Academic supervisor evaluation).
3. Training certificates from each company were received for all students who completed their training as agreed upon.
4. A student evaluation form for the training organization was filled out.
5. A detailed report on the content of the training period was submitted.
6. The training reports were reviewed and evaluated by the academic supervisor based on the specifications announced to the students.

7. A schedule for the discussion committees that would review the students' reports on the training content was prepared. The discussion for the students of the training courses was scheduled in August, as their results depended on this discussion.
8. The final evaluation forms for each student were filled out by the discussion committees. The results for the two training courses (Training 1 and Training 2) were approved by the department heads, control offices, and institute administration. Statistical data was compiled and the results were announced as part of the academic courses.
9. A statistical analysis was conducted for the Student Evaluation Forms for the Training Organization, the Academic Supervisor Evaluation, and the Field Supervisor Evaluation.
10. Samples of the Academic Supervisor Evaluation Forms for the Training Organization were collected.
11. The academic supervisor's evaluation of the training organization over the past three years was conducted.
12. A report on the continuity and exclusion of companies that trained students was prepared.

Analysis of Student Evaluation Forms for Training Organizations Across the Three Field Training Departments for the Academic Year 2023-2024, Along with the Evaluation Forms from Academic Supervisors for Companies and a Comparison of Company Performance in Field Training Over the Last Three Years.

3. Program Quality Assessment

No.	Key Performance Indicator	Measurement Methods	Measurement Timing	Target Level (Last year)	Achieved Level (for the current year)	New Target Level (for the next year)
1	Percentage of students achieving the program learning outcomes	Course reports + exam analysis	End of year	≥ 80%	**82%**	**90%** or higher (aiming for continuous improvement)
2	Student satisfaction rate with the quality of the program	Questionnaires	Annually after program completion	≥ 80%	**91%**	**95%**
3	Graduation rate within the minimum study	Student academic records	Annually at the end of academic year	≥ 75%	**⟩90 %**	**93%**

	duration (5 years)					
4	Employer and external stakeholders' satisfaction with graduates	Questionnaires + Site visits	Annually	≥ 75%	**%94**	**96%**

- **Program Key Performance Indicators (if any)**

Comment on the results of the performance indicators in case of low target achievement:

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.....No

- **Stakeholder evaluation**

Category*	Timing	Number of Participants	Means of Evaluation	Strengths	Points that need improvement

Final Year Students	**5/2025**	**160**	**QUESTIONAIRE**	The program's quality is highly rated by students, with 42% satisfied with the content and 40% expressing effective teaching methods. The curriculum aligns well with labor market needs, with 47% deeming it relevant. 45% of students find the resources sufficient, and 38% find the lecture environment engaging. The majority of students believe the courses successfully develop necessary competencies, with 41% rating this as excellent.	The study found that while students generally like the course content, there are areas for improvement. Specifically, 33% of students feel content is weak, and 2% believe teaching methods don't contribute enough to their knowledge. Additionally, 6% of students feel lectures lack active participation and interaction. The study suggests a need for stronger focus on competency development and improved resource support.

Teaching Staff	**6/2025**	**5**		The academic program is praised for keeping pace with scientific advancements, with 50% of respondents believing it is regularly updated. Learning outcomes are highly regarded, with 55% rating them as excellent and 29% as good. Nearly half of respondents see effective mechanisms for evaluating and improving the program. Support for scientific research and faculty development is evident, with 44% deeming it excellent and 37% good. Resource availability is also deemed excellent, indicating good infrastructure and facilities.	The program's ability to keep up with scientific developments is criticized by 4% of respondents, while 5% believe curriculum updates don't meet market needs. 3% find evaluation mechanisms inadequate, suggesting room for more robust tools. Support for scientific research and faculty development is rated only as excellent by 44%, suggesting a need for enhanced support. Continuous assessment and improvement of facilities and materials are necessary for maintaining standards in rapidly evolving fields.

Fresh Graduates	**7/2025**	**53**	**QUESTIONAIRE**	The academic program is praised by 49% of respondents for effectively preparing students for the labor market, with 55% finding the learning outcomes useful in real work environments. Practical training and applications are highly regarded, with 44% rated as excellent and 34% as very good. The course content is relevant to current industry requirements, and 52% would recommend the program to others.	The program's positive feedback suggests that it could benefit from further development. Despite positive feedback, 2-3% of students perceive it as weak in preparing them for the labor market or offering enough practical training. Additionally, 6% feel the course content isn't aligned with job requirements. To improve, efforts should focus on increasing practical training opportunities and refining the curriculum.

Labor market representatives (Employers)	**7/2025**	**10**	**QUESTIONAIRE**	The data shows that 56% of graduates possess the necessary technical skills for the job market, and 51% are committed to discipline and teamwork. 50% demonstrate critical thinking and problem-solving skills, and 54% are capable of continuous learning. A high 57% express satisfaction with the program's quality and 52% believe it aligns well with modern industry trends, indicating its effectiveness in preparing students with relevant skills.	The program has strengths, but some areas need improvement. Some respondents rated certain aspects as weak or acceptable, such as limited critical thinking and problem-solving skills. Additionally, there is room for improvement in aligning graduates with market expectations, with 33% feeling technical skills are inadequate and 5% stating discipline and teamwork are not developed. The program should focus on updating its curriculum and strategies to better match industry trends.

The local community)	7/2025	60	**QUESTIONAIRE**	The program's significant contribution to community service and development is praised by 57% of respondents, who believe it supports and nurtures the local community. 50% of participants believe students actively participate in community activities, demonstrating high engagement. Communication between program management and community institutions is highly regarded, with 49% rating it as excellent. 55% of respondents believe the program's outputs address local community issues.	The program's community service contribution is perceived weak by 4%, and student participation in activities is limited by 4%. Communication with community institutions needs improvement for better collaboration. The program should focus on expanding its practical application to solve community problems and address evolving needs, ensuring its social impact continues to grow.

* Attach the report of the analysis of the questionnaire or any other means used, and the p**oints evaluated by each category**

Comment on the overall evaluation of the quality of the program and the proposed recommendations (based on the results of the previous table):

The comprehensive evaluation indicates a fundamentally robust academic program with significant strengths, as evidenced by consistently high satisfaction rates (75-85% "Excellent/Very Good") across stakeholder surveys—students, graduates, employers, faculty, and community partners. Key strengths include strong alignment with job market needs, graduate technical proficiency, adequate material resources, impactful community engagement, and clear learning outcomes. However, targeted vulnerabilities require intervention: recurring dissatisfaction (5-10%) highlights gaps in dynamic curriculum updates, practical training opportunities, classroom interactivity, faculty development support, and granular alignment with industry evolution. The proposed recommendations aptly address these gaps through integrated, actionable strategies—

modernizing labs/digital resources, expanding industry partnerships for real-world learning, implementing active pedagogy (flipped classrooms, case studies), and enhancing structured feedback mechanisms. Crucially, success hinges on prioritizing cross-cutting initiatives: industry collaboration must simultaneously refresh course content and boost practical exposure; faculty development workshops should empower updated teaching methods and research relevance; and enriched academic support must target both struggling students ("Pass-to-Good" transitions) and high achievers. Rigorous tracking of KPIs—like failure rate reduction, industry placement metrics, and resource utilization—will be essential to transform these recommendations from plans into sustained excellence, elevating the program from its solid foundation to truly exceptional, future-proofed education.

4. Program Enhancement

Comment on incomplete corrective/improvement actions from last year's plan (if any):

.....Non.....

Comment on the points that need improvement addressed in the course report plans:

The course reports reveal systemic challenges requiring program-level intervention. These include a decline in academic excellence, ineffective feedback loops, resource limitations, high failure and "pass" rate stagnation, passive and disengaging pedagogy, assessment alignment and rigor, and a gap in practical/industrial connections. Students report significant drops in "Excellent" grades and low percentages of high achievers, indicating a need for enhanced challenge and enrichment. Ineffective feedback loops and resource limitations hinder practical skill development and modern pedagogy. Assessment alignment concerns and a gap in practical/industrial connections highlight the need for enhanced academic challenge, transparent and supportive assessment, modernized resources, targeted student support, active and applied learning, and stronger industry integration.

Program action plan for the next academic year (considering the results of program quality assessment and the course reports improvement plans)

No.	Priorities of Development	Corrective/ improvement Actions	Methods of implementation	Responsibility	Notes

1.	**Elevate Academic Excellence & Challenge**	Develop a structured "Advanced Scholars Program" with enrichment pathways.	- Curate advanced case studies & problem sets. - Mandate optional high-order thinking (HOT) questions in all exams (Bloom's 4-6). - Establish faculty mentorship for top 10-15%.	Program Director, Course Coordinators	Monitor participation, performance on HOT questions, and changes in the "Excellent" category's grade distribution.
2.	**Revolutionize Feedback & Assessment Clarity**	Implement a standardized, rubric-based feedback system across all core courses.	- Develop & mandate detailed grading rubrics for all assessments. - Institute structured post-exam review sessions (in-class + optional 1:1). - Train all TAs on feedback best practices & rubric use.	Assessment Committee, HoD	Pilot rubrics & review sessions in Sem 1; Full implementation & TA training by Sem 2. Monitor via student surveys.

3.	**Modernize Labs & Digital Learning Resources**	Upgrade physical lab infrastructure & expand access to high-quality digital simulations/tools.	- Secure funding/industry partnerships for critical lab equipment. - Procure/subscribe to key simulation platforms (e.g., Labster, Aspen suite). - Create a centralized digital repository for video tutorials, case studies, & interactive materials.	Lab Manager, IT Dept, Funding Office	Prioritize labs with highest dissatisfaction. Track usage stats of digital resources & post-upgrade satisfaction surveys.
4.	**Implement Proactive Academic Support Nets**	Launch targeted support initiatives for struggling ("Pass"/"Fail") and middle-tier ("Good") students.	- Establish mandatory remedial workshops for core concepts showing high failure. - Create a formal Peer Mentoring Program pairing high achievers with "Pass" students. - Offer weekly "Concept Clinics" & drop-in tutoring.	Student Support Office, Faculty Advisors	Set clear targets: Reduce failure rates by X%, shift Y% of "Pass" students to "Good" or higher. Track via grade analysis & participation.

5. Transform Pedagogy: Active & Applied Learning	Shift significant course time from passive lecture to active, applied, and industry-connected methods.	- Mandate minimum 30% active learning (e.g., case studies, simulations, group projects, flipped classrooms) in course design. - Develop 5+ industry-sponsored case studies per relevant program. - Organize 2 industry tours & 4 expert guest lectures per program annually. - Integrate relevant simulation software (e.g., Aspen) into coursework.	Teaching & Learning Center, Industry Liaison	Provide faculty PD on active learning techniques. Monitor implementation via course syllabi reviews & student engagement surveys.	

Name & Signature
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