



**COVENANT UNIVERSITY, OTA**  
**EXTERNAL EXAMINER'S REPORT FORM**

**(A) GENERAL INFORMATION**

|  |  |                                     |
|--|--|-------------------------------------|
| Preliminary Information  |  | Academic Session<br>20[21] / 20[22] |
| 1.   | College: [ENGINEERING]   |                                     |
| 2.   | Department: [CHEMICAL ENGINEERING]   |                                     |
| 3.   | Programme: [B. ENG. CHEMICAL ENGINEERING]  |                                     |
| 4.   | Name of External Examiner (with full title): [ENGR. PROF. O. A. OLAFADEHAN]                  |                                     |
| 5.   | External Examiner's Home Institution: [UNIVERSITY OF LAGOS, LAGOS, NIGERIA]                  |                                     |
| 6.   | External Examiner's Department: [CHEMICAL AND PETROLEUM ENGINEERING]                         |                                     |
| 7.   | Rank of External Examiner: [PROFESSOR]   |                                     |
| 8.   | Telephone Number: [+234802-912-9559]   |                                     |
| 9.   | Email address: [oolafadehan@unilag.edu.ng]   |                                     |
| 10.  | Course Code: [CHE 53] Title of course examined: [Patent and Invention, Industrial Chemistry] |                                     |
| Note: All preliminary information are to be provided by Head of Department before this form is sent to the External Examiner |  |                                     |

**(B) EXTERNAL EXAMINER'S OBE COMPLIANCE**

- (i) Professional Qualification: [FIOGR, NSChE, NSE]  
(ii) Are you COREN Registered? [yes] If yes, COREN Registration [R15180]  
(iii) Have you undergone any training on OBE? [no] If yes, when? [ ]  
(iv) Are you OBE Certified? [no] If yes, when? [ ]

**(C) KEY ASPECTS WHERE YOUR COMMENTS ARE SOUGHT AS AN EXAMINER**

**Guiding instructions on completion of External Examiner's report form**

A checklist, containing prerequisite conditions for external examining, has been included for your use. Please specify if there are issues or comments made in your previous report that have not been addressed. Your report need not be limited to the areas we have highlighted, and you are requested in Section 10 to make free comments on any other matter that you consider important.

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*Please clearly differentiate between suggestions or advice for consideration and recommendations that require action of the relevant authorities.*

You have our assurance that your report will be considered at the most appropriate levels, first in the Department concerned and then subsequently at the College level in order to ensure that substantial issues that you raise are given the necessary and commensurate attention. In addition, your report will be considered subsequently as part of the Annual Appraisal and Quality Improvement processes. You are asked not to identify individual students or staff members by name.

You are asked to type in your report into the soft copy of this form addressed to the Vice Chancellor of Covenant University promptly. The report is expected within 2 weeks of vetting of the examination questions and marked scripts.

## **1. Programme's OBE Compliance**

You are requested to make clear and specific comments on the following vital areas related to OBE curriculum:

### **1a. Assessment of programme curriculum**

The programme curriculum was assessed and found to be OBE-compliant.

### **1b. Assessment of OBE implementation and achievement of the POs by the students.**

The programme objectives (OPs) were achieved based on the assessment of OBE implementation.



1c. Assessment of staff quality including qualifications and industry exposure. This should include an assessment of work load of each staff in teaching, research, consultancy and supervision of student projects.

It was discovered that 15 Faculty of 18 possessed PhD and all the Departmental Faculty did have succinct exposure in chemical and allied industries. The work load of each staff was moderate with a staff taking almost 2 courses per semester and supervising 4 students in 2021/2022 academic session. The supervision of students' design and research projects (CHE 523 & CHE 529) was excellent with topics covering virtually all areas of chemical engineering. The research prowess of each staff was outstanding with many research outputs in Scopus and Web of Science and their research works are visible to the national and international academic communities via Google scholar, ResearchGate, Academia, amongst others.

1d. Assessment of staff-student ratio and student workload. If found to be insufficient, please recommend corrective action to be taken by the institution.

The staff-student ratio was adequate with ratio 1 to 3.44 for the 2021/2022 academic session and the student workload per semester was sufficient, which did not pose much curriculum stress on the students.

1e. Assessment of preparation process of examination papers i.e. procedures for setting and vetting, quality assurance, confidentiality and security.

The preparation processes of examination papers were duly followed by setting the questions well before the Omega examinations were taken and vetted by an academic staff in the Department and me as an External Examiner who made some comments/suggestions/corrections/objective criticisms. All these were factored into the Omega examinations written by the students having protected the integrity of the examination questions.

If. Assessment of examination papers and marking schemes set for the questions, coverage of syllabus, adequate balance between theory and application, setting of questions of equal level, adequate choice of questions, and appropriateness of marking scheme.

Six examination papers (CHE 520, CHE 521, CHE 522, CHE 524, CHE 526 and CHE 527) were assessed for the Omega Semester 2021/2022 and their respective marking schemes were in conformity with the Questions set. All the questions did reflect exhaustive coverage of the syllabuses. They presented the ability to bring out the best of the students on their understanding and application of the current state of chemical engineering fundamentals to chemical and allied industries. Both the theoretical framework and mathematical concepts/applications were considered by the Examiner (s) in setting the questions. Moreover the design and research projects (CHE 523 & CHE 529) were assessed and found to be well executed by the students with

Ig. Assessment of the marked answer scripts based on a sample of good, average and weak candidates. Fairness/disparity of marking, follow-through method adopted if answer to one section is wrong, response of candidates to the question, and distribution of marks

The marked answer scripts of 41 students who sat for CHE 520, 61 students for CHE 521, 60 students for CHE 522, 59 students for CHE 524, 1 student for CHE 526 and 17 students for CHE 527 were duly vetted on July 24/25, 2022 and found to be void of any human and computational error/mistake, based on a random sample of excellent, very good, good, fairly good, average and weak students. Marks were equally distributed according to the depth of questions set. No form of favoritism was discovered in all the answer script vetted.

Ih. Assessment of coursework, laboratory work, assignments, design projects, final year projects.

Course works and assignments were assessed, laboratory work was not applicable to the final year students so it could not be assessed. The final year design and research projects were assessed at the end of the 2021/2022 academic session. The theme of the design project addressed environmental issues and health concerns by utilising mixed biomass waste of cassava peel and melon seed husk to produce 95% purity green hydrogen by gasification and pyrolysis. The design simulation softwares of ASPEN PLUS, HAZOP, HAZID and risk management were employed in achieving this aim. The final year research projects addressed topical

Ij. Assessment of examination procedures and regulations

The examination procedures and regulations were carried out and assessed by the U



1k. Assessment process of the programme.

The programme was assessed and found to compete with the best national, continent and global practices of Chemical Engineering.

## 2. Your Participation in the Moderation process

*Please include comments on the following: adequacy of orientation information given to you as regards your role as External Examiner; the value of relevant documentation received (including University regulations and assessment criteria); the sufficiency of time given to you to approve examination papers; opportunities for inspection of sufficient samples of examination scripts.*

Sufficient orientation information was given to me by the HoD, Chemical Engineering and the Departmental Examination Officer as regards my role as External Examiner. The assessment criteria were made available as a guide. I had access to all the relevant documents well before the Omega Semester Examinations 2021/2022 were conducted and had ample opportunities for inspection of quite a number of examination scripts.

## 3. Suitability of the Course Structure, Learning Content and Modules

*Please comment on whether the structure and content of the taught course(s) and its constituent modules are coherent and appropriate for the specific undergraduate/postgraduate level concerned, the course outline, course objectives and intended learning outcomes of course concerned. Have you found evidence of research-led teaching/ scholarship informing the curriculum and its pedagogy?*

The structure and contents of CHE 520, CHE 521, CHE 522, CHE 524, CHE 526 and CHE 527 and their constituent modules were coherent and appropriate for the Bachelor Degree in Chemical Engineering, the course outline and understanding and application of each course in the process and chemical industries. There was a strong evidence of research-led teaching and scholarship informing the curriculum and its pedagogy.

#### 4. Quality of Assessment

*Please comment on whether the methods of assessment, marking, and grading (if applicable) are appropriate to the objectives, intended learning outcomes, structure, and content of the course. In addition, whether the examination questions assess a variety of cognitive dimensions (such as testing for knowledge, understanding, application, analysis, synthesis, and evaluation); whether marking schemes and grading are set at the appropriate level; whether the method of final assessment allows for appropriate discrimination between candidates.*

The methods of assessment of the students pertaining to the questions set, marking of examination scripts and grading of students were found to be eminently appropriate to the objectives, intended learning outcomes, structure and contents of CHE 520, CHE 521, CHE 522, CHE 524, CHE 526 and CHE 527. The examination questions did assess sound knowledge, deep understanding, industrial applications, rigorous analyses, detailed synthesis and evaluation in all. The marking schemes and grading were at the appropriate level and the final assessment of the students by each of the Examiners was done without any bias or favour.

#### 5. Evaluation of Marking Standards

*Please comment on whether the marking of examination scripts was conducted rigorously and objectively, with the marking schemes and grading applied in a consistent way; whether the final assessment of the candidates was fair and in accordance with the criteria for marking and grading; and whether evidence of this consistency of standards can be seen across modules of the course.*

The marking of examination scripts in CHE 520, CHE 521, CHE 522, CHE 524, CHE 526 and CHE 527 was conducted rigorously and objectively, with the marking schemes and grading applied in a consistent manner. The final assessment of the candidates was adjudged by me to be excellent and in consonance with the criteria for marking and grading and the consistency of standards was evidenced across the modules of each of the courses.



## 6. Quality of Students' Performance / Learning Outcome

*Please comment on your overall impression of the quality of the students and their performance and whether the general performance depict the attainment of learning objectives and intended learning outcomes of the course. Does the range of assessment methods and performance provide evidence of effective student learning?*

I found the quality of the students and their performances very impressive, which depicted the attainment of learning objectives and intended learning outcomes of each of the courses. The methods of the range of assessment and performance provided strong evidence of effective student learning.

## 7. Comparison with Similar Programmes of Study at Other Institutions

*Based on your experience, please indicate whether you consider that the standards of the course, its mode of assessment, and performance of students are comparable with those at other top institutions (National and International)*

## 8. Administration of the Assessment Process

*Please comment on the procedures followed for the external assessment, the administrative arrangements and their appropriateness and effectiveness, and the adequacy of the support provided to you.*

The procedures for the external assessment were strictly adhered to; the administrative arrangements were superlative, eminently appropriate and highly effective; and the support was humane and sufficient to get the assignment done timeously.

## 9. External examiners' report checklist

Click on the box to indicate your choice

|   |     |
|---|-----|
| Programme Material (Did you Receive the following)  | Yes |
| Course / programme handbook(s)/Curriculum?  |     |
| Programme/Course regulations (these will most likely be in the programme handbook)?   | YES |
| A copy of the Course Curriculum (these will be in the programme handbook)?  | YES |
| Assessment briefs/marking criteria?   | YES |
| Draft examination Paper   | YES |
| Did you receive all the draft papers?   | YES |
| If not, was this at your request?   | YES |
| Were the nature and level of the questions appropriate?   | YES |
| If not, were suitable arrangements made to consider your comments?  | YES |
| Marking examination scripts   | YES |
| Did you receive all the scripts?  | YES |
| If you did not receive all the scripts, was the method of selection satisfactory?   | YES |
| Were the general standard and consistency of marking appropriate?   | YES |
| Were the scripts marked in such a way that the correlation between allotted marks on the marking scheme and what is awarded on the scripts?           | YES |
| Project reports   | YES |
| Was the layout and organization of dissertations/final year reports appropriate?  | YES |
| Were the method and standard of assessment appropriate?   | YES |
| Continuous Assessment (CA)  | YES |
| Was the allocation of scores between CA and Examination satisfactory?   | YES |
| Was the performance in CA satisfactory relative to examination performance?   | YES |
| Was the course file presented? (containing: CLO, Lecture notes, CV of the lecturer, questions for tests, examination with marking guides and results) | YES |
| 12345   |     |



10. Other Comments/Recommendations

For a 3-unit course, NUC stipulates that the Examiner should set 7 questions and students are required to answer only five questions in 3 hours. Hence, examination questions are to be set in such a way that the student will have the opportunity of having an option of choice instead of being asked to answer all the questions set, as was conducted in the Omega Semester 2021/2022 in particular and in general, the academic session

Name of External Examiner

OLAOSBIKAN ABIDOYE OLAFADAHAN

Rank

PROFESSOR

Digital Signature

Olaosebikan A. Olafadehan

Digital signed by Olaosebikan A. Olafadehan  
DN: cn=Olaosebikan A. Olafadehan, o=UNIVERSITY OF LAGOS, Lagos,  
NIGERIA, ou=Chemical and Petroleum Engineering,  
email=olaosebikan@unilag.edu.ng, c=NG  
Date: 2022.07.13 09:25:24 +0300

Date

July 28, 2022

11. HOD's Comments on observations of External Examiner and actions to be taken

Satisfactory

Name

Prof. V.E. Efeovbokhan

Digital Signature

~~Prof. V.E. Efeovbokhan~~

Date

28/07/22