Chemical Engineering Undergraduate Transfer Agreement
between
Chaitanya Bharathi Institute of Technology (CBIT), Hyderabad, India)
and
Rowan University (New Jersey, USA)

1. Program Description

This program is designed to allow participating students to study at both Chaitanya Bharathi Institute of Technology (CBIT)and Rowan University (Rowan). The transfer agreement will allowstudents to study Chemical Engineering at CBIT for two years and transfer to the Bachelor of Science in Chemical Engineering program at Rowan at the end of their second year. Students are expected to study at Rowan up to two years before they can earn a Bachelor of Science in Chemical Engineering degree from Rowan. Students will need to meet all graduation requirements in order to earn the aforementioned degree from Rowan. The undergraduate courses they will need to take at Rowan will be determined after Rowan receives the participating student's most recent transcript that includes the courses in progress at CBIT. Rowan may require further information (i.e. course syllabi) for transfer-credit evaluation.

2. Educational Goals

This program is designed to allow participating students to study at both CBITand Rowan, and have diverse learning opportunities at two higher education institutions.Once students meet all graduation requirements of Rowan and successfully complete the BS Chemical Engineering program at Rowan, they will be able to apply for the Optional Practical Training (OPT). The OPT will allow participating students to work in the U.S.A. up to three years provided that their OPT application and STEM extension are approved. Additionally, the two-year study at Rowan will help students improve their English language proficiency including technical English they will need to compete in the global job market. The transfer program is expected to enhance both institutions' internationalization and globalization.

3. Application, Admission, and Enrollment

Sophomore students in the undergraduate Chemical Engineering program at CBIT can apply for admission to the BS Chemical Engineering program at Rowan under this transfer agreement. Students will submit the following application materials to Rowan: online transfer application form, most-up-to-date transcript from CBIT, language proficiency test score (min 70 on TOEFL, 6.0 on IELTS, or 95 on Duolingo test), copy of bio page of passport, and other documents Rowan may need for proper evaluation of the application (i.e. course descriptions, syllabi, etc.). All admitted students must turn in an official copy of the most up-to-date transcript before they can register for courses at Rowan. Each student will be assigned an academic advisor at Rowan, and students will enroll in courses at Rowan during the mandatory International Student Orientation.

4. Financial Responsibilities & Scholarships

Students are responsible for all educational and related expenses including but not limited to tuition, fees, textbooks, housing, meals, health insurance, transportation, passport, and visa expenses. Rowan will waive the undergraduate transfer application fee for all CBIT students applying for this transfer program. Rowan

will provide qualified students with the necessary immigration documents whichwill allow them to apply for a student visa at the US Embassy/Consulates in India. Rowan will arrange airport pick-up service for students if requested. This service is free of charge and available for Philadelphia International Airport only. All students admitted to the BS Chemical Engineering program at Rowan through this transfer agreement will be automatically considered for available scholarships at Rowan; however, with no guarantee of receipt, and will be notified of the award and the amount prior to their arrival to the United States. Scholarships are renewable as long as the student meets the requirements to maintain awarded scholarship(s).

5. Main Disciplines

BTech Chemical Engineering at CBIT
B.S. in Chemical Engineering at Rowan

6. Curriculum of the BS Chemical Engineering Program at Rowan University

The complete Chemical Engineering curriculum at Rowan can be found at:https://engineering.rowan.edu/programs/chemical/undergraduate/curriculum.html and https://engineering.rowan.edu/_docs/chemical/curriculum-flowchart.pdf

7. Course Transfer Credits

Rowan agrees to award credits for select courses students have taken at CBIT. A complete list of courses transferable to Rowan are listed in Appendix A. Courses with grades below the minimum grade required by Rowan will not transfer to Rowan.

8. Schooling and Degree Awarding

Length of study at CBIT: two years of full-time attendance.Estimated length of study at Rowan: two years of full-time attendance. It may require summer registration.After successful completion of theBS Chemical Engineering program at Rowan and meeting the graduation requirements of Rowan, students will earn a Bachelor of Science degree in Chemical Engineeringfrom Rowan.

9. Graduate Studies at Rowan University

Students who successfully graduate from Rowan's BS Chemical Engineering program will be able to apply for the M.S. Chemical Engineering program at Rowan. The International Center at Rowan will assist interested students throughout the application process.

10. Period of the Agreement

This agreement shall be in effect for a term of five (5) years from the date of execution and shall be reviewed by both parties at the end of such term and may at that time be updated and signed for an additional period of time to be specified in the updated document. Continuation of the program will be based on students' successful completion of the program, program viability, and other relevant factors determined by CBITand Rowan.

11. Termination of the Agreement

Either party hereto may terminate this agreement at any time upon ninety (90) days advance written notice.

If the Agreement is terminated, students who have been admitted to the program will be allowed to continue in the program as long as they are in good academic standing at either CBIT or Rowan.

Dr. G. P. Saradhi Varma
Principal, CBIT
Gandipet, Hyderabad

Date: Oct. 22. 2020
MM / DD / YY

Dr. Anthony M. Lowman, Provost and
Senior Vice President for Academic Affairs
Rowan University
Glassboro, New Jersey, USA

Date: 1/8/21
MM / DD / YY

Appendix A

List of Courses Rowan University Offers Credit for under the Transfer Agreement between Rowan and CBIT

Mapping for CBIT BTech in Chemical Engineering Program

This table shows the Rowan Chemical Engineering degree requirements on the left, and on the right, the CBIT path to fulfilling them.

Rowan Course Number & Title → CBIT Course Number & Title

- If the CBIT course is in regular font, that means (based on reading CBIT "syllabus" information) that it should be considered equivalent: Rowan gives CBIT students transfer credit for Introductory Mechanics if they passed Engineering Mechanics at CBIT, etc.
- If the CBIT course is in italics, that means it is a substitution. So, "Programming for Problem Lab" would not transfer in as Freshman Engineering Clinic I, Rowan accepts it as a substitution.

The table shows 47 "required" credits they would take at Rowan, 12 and 11 in the first two semesters respectively, and then 24 during the senior year which can be distributed different ways between the two semesters. So, students should have the space for at least one additional course every semester that they can use to fulfill the remaining Rowan Core requirements, pursue a minor or concentration, or just take a course as a free elective.

Courses in Brown Boxes	Substitute Courses
Courses in Blue Boxes	Direct transfer credit
Courses in Yellow Boxes	Courses students need to take at Rowan

Students must take courses in brown and blue boxes at CBIT before they transfer to Rowan University.

Rowan Requirement (credits)	CBIT Course (credits)
CHEM06100 Chemistry I (4)	*CBIT Entrance Requirements*
CHEM06101 Chemistry II (4)	*CBIT Entrance Requirements*
PHYS00220 Introductory Mechanics (4)	Engineering Mechanics (4)
CHEM07200 Organic Chemistry I (4)	Chemistry (4)
Approved Chemistry Elective (3)	*Physics Lab (1.5) + Chemistry Lab (1.5)*
COMP01111 College Composition I (3)	*English (2) + English Lab (1)*
ENGR01101 Freshman Engineering Clinic I (2)	*Programming for Problem Lab (2)*
ENGR01102 Freshman Engineering Clinic II (2)	*Workshop/Manufacturing Practice (3)*
ENGR01201 Sophomore Engineering Clinic I (4)	TAKEN AT ROWAN- SEMESTER 5
ENGR01202 Sophomore Engineering Clinic II (4)	TAKEN AT ROWAN- SEMESTER 6

MATH01130 Calculus I (4)	Mathematics – I (4)
MATH01131 Calculus II (4)	Mathematics – II (4)
MATH01230 Calculus III (4)	Mathematics – III (4)
MATH01235 Math for Engineering Analysis (4)	Numerical Methods in Chemical Engineering (4)
CHE06201 Principles of Chemical Processes I (2)	Material and Energy Balance Computations (4)
CHE06202 Principles of Chemical Processes II (2)	
CHE06241 Chemical Engineering Fluid Mechanics (2)	Fluid Mechanics (4)
ENGR01303 Junior Engineering Clinic I (2)	*Basic Electrical Engineering (4)*
ENGR01303 Junior Engineering Clinic II (2)	*Basic Electrical Engineering Lab (1)*
CHE06309 Process Fluid Transport (3)	TAKEN AT ROWAN- SEMESTER 5
CHE06310 Chemical Eng. Thermodynamics I (3)	Chemical Eng. Thermodynamics I (4)
CHE06311 Heat Transfer Processes (3)	TAKEN AT ROWAN- SEMESTER 5
CHE06312 Separation Processes I (2)	TAKEN AT ROWAN- SEMESTER 5
CHE06314 Separation Processes II (3)	TAKEN AT ROWAN- SEMESTER 6
CHE06315Chemical Eng. Thermodynamics II (3)	Chemical Eng. Thermodynamics II (4)
CHE06316 Chemical Reaction Engineering (4)	TAKEN AT ROWAN- SEMESTER 6
CHE06381 Chemical Eng. Materials (2)	Material Science (3)
CHE06385 Chemical Engineering Modelling (2)	*Programming for Problem Solving (3)*
CHE06401 Chemical Process Component Design (3)	TAKEN AT ROWAN- SEMESTER 7
CHE06403 Unit Operations Laboratory (3)	TAKEN AT ROWAN- SEMESTER 7 or 8
CHE06405 Process Dynamics and Control (3)	TAKEN AT ROWAN- SEMESTER 7
CHE06406 Chemical Plant Design (3)	TAKEN AT ROWAN- SEMESTER 8
CHE06407 Chemical Process Safety (2)	TAKEN AT ROWAN- SEMESTER 7 or 8
ENGR01403 Senior Engineering Clinic I (2)	TAKEN AT ROWAN- SEMESTER 7
ENGR01403 Senior Engineering Clinic II (2)	TAKEN AT ROWAN- SEMESTER 8
CHE06 Approved CHE Elective I (3)	Technology of Surface Coatings and Oils (4)
CHE06 Approved CHE Elective II (3)	TAKEN AT ROWAN- SEMESTER 7 or 8
CHE06 Approved CHE Elective III (3)	TAKEN AT ROWAN- SEMESTER 7 or 8
Artistic Literacy (3)	TAKEN AT ROWAN- SEMESTER 5
Global Literacy (3)	TAKEN AT ROWAN- SEMESTER 6
Humanistic Literacy (3)	TAKEN AT ROWAN- SEMESTER 6
Literature Intensive (3)	TAKEN AT ROWAN- SEMESTER 8

CBIT/Rowan 2+2 Chemical Engineering Program

Study Plan for Year 3 and 4

Semester V	**Semester VI**
Sophomore Engineering Clinic I (4)	Sophomore Engineering Clinic II (4)
Process Fluid Transport (3)	Separation Processes II (3)
Heat Transfer Processes (3)	Chemical Reaction Engineering (4)
Separation Processes I (2)	Global Literacy (3)
Artistic Literacy (3)	Humanistic Literacy (3)
Semester VII	**Semester VIII**
Chemical Process Component Design (3)	Chemical Plant Design (3)
Process Dynamics and Control (3)	Senior Engineering Clinic II (2)
Senior Engineering Clinic I (2)	Approved CHE Elective III (3)
Approved CHE Elective II (3)	Chemical Process Safety (2)
Unit Operations Laboratory (3)	Literature Intensive (3)