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HOWARD

UNIVERSITY

College of Engineering, Architecture and Computer Sciences
Department of Chemical Engineering
Washington, DC 20059

**CHEMICAL ENGINEERING
UNDERGRADUATE PROGRAM
HANDBOOK**

**For Students Entering the Chemical Engineering Degree Program
Fall 2001 to Present**

Last Revision: January 2005

From the Chair, Department of Chemical Engineering

I would like to take this opportunity to welcome you to Howard University and the Department of Chemical Engineering in the College of Engineering, Architecture and Computer Sciences (CEACS). I am delighted that you have chosen to enroll in our program and work towards being awarded the Bachelor of Science degree in Chemical Engineering (BSChE). Our undergraduate program in chemical engineering is accredited by The Accreditation Board for Engineering and Technology (ABET). You should be aware that the department also offers the Master of Science in Chemical Engineering (MSChE) and you are encouraged to set your academic goals and sights high enough to work towards obtaining an advanced degree in chemical engineering, either here at Howard or at another accredited university.

The Department of Chemical Engineering was established in 1969 with the appointment of a chair and the admission of five students to the program. Since then, the department has grown to include six regular faculty with around 90 undergraduate students and 15 graduate students in the MSChE program. Over the years, the department has produced many outstanding graduates who have gone on to successful and exemplary careers in industry, academia and government. Our students have also gone on to distinguished careers in other professions including medicine, law, and management. With the excellent and rigorous academic preparation provided by our program, we are confident that when you complete the program, you will be in a strong position to take full advantage of the many opportunities available to our graduates in science, engineering, technology, medicine, business and government.

In this Handbook, you will find the listing of courses designed for a four-year curriculum and many other resources that you will need during your sojourn at Howard University. You will find this information useful and critical to your success here; however, this Handbook does not provide a complete guide to information you need for your day-to-day stay here at Howard. You should definitely consult other university and college publications such as the *H-Book*, the *Student Reference Manual*, the *Directory of Classes* as well as *The Howard University Undergraduate Bulletin*. Some of this information is available on the web at www.howard.edu and some may be available in hard copy format. Please take time to visit the Office of Student Services in Room 1114 in L.K. Downing (LKD) Hall and acquaint yourself with other University and College resources; also, please feel free to visit the Office of the Department of Chemical Engineering in Room 1009 in LKD Hall. Again, let me take this opportunity to welcome you to Howard and the Department of Chemical Engineering, and I invite your questions and comments.

The Department of Chemical Engineering faculty and staff are committed to continuous improvements of our programs. We encourage your questions and comments on the various aspects of our program and are particularly interested in your comments regarding the program's educational objectives, outcomes and curriculum.

Ramesh C. Chawla, Ph.D.
Professor and Chair

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OVERVIEW OF CHEMICAL ENGINEERING AND THE DEPARTMENT

Chemical Engineering is the rigorous study of the broad range of systems involved in the transformation of materials and energy from one form to another. It focuses on the analysis of the chemical, physical and biological phenomena that form the basis of any process and culminates in process systems designs that are critically informed by consideration of relevant environmental, social and safety concerns.

The Department of Chemical Engineering offers an undergraduate program leading to the Bachelor of Science degree in Chemical Engineering and a graduate program of course work and research leading to the Master of Science in Chemical Engineering. The undergraduate program is accredited by the Accreditation Board of Engineering and Technology.

The department is one of six departments in the College of Engineering, Architecture and Computer Sciences at Howard University. Howard University is a private, coeducational institution located in the heart of the diverse, vibrant, multicultural metropolitan area that is home to the nation's capital, Washington, DC. The region offers an unsurpassed breadth of governmental, private, and academic resources for education and research.

MISSION OF THE DEPARTMENT

The mission of the Department of Chemical Engineering at Howard University is to educate and prepare students to be technological, managerial and public service leaders in the 21st century. The mission is grounded in producing students with a keen sense of ethical and social responsibility, excellent communication skills, and a holistic appreciation of technology within the context of relevant social, political and economic concerns. The department is committed to providing an academic and learning atmosphere that will attract outstanding researchers and educators, be committed to the development of solutions to societal and human problems, and contribute to the scholarly enterprise of the University as a whole.

PROGRAM EDUCATIONAL OBJECTIVES

- To produce graduates who can proficiently practice chemical engineering in a wide variety of contemporary industrial settings.
- To produce graduates who have the basic competencies required to pursue advanced study and research in chemical engineering and other related disciplines.
- To produce graduates with well-developed problem-solving skills and understanding of current technical, economic, environmental and safety issues and their impact on local and global communities.
- To produce graduates with the communication and leadership skills necessary to work effectively and ethically.
- To produce graduates who have had the broad education and experience necessary to understand the issues of under-represented minorities and gender diversity in the work place.

PROGRAM LEARNING OUTCOMES

Students successfully completing our program will have:

- (a) An ability to apply knowledge of mathematics, science, and engineering;
- (b) An ability to design and conduct experiments, as well as to analyze and interpret data;
- (c) An ability to design a system, component, or process to meet desired needs
- (d) An ability to function on multi-disciplinary teams;
- (e) An ability to identify, formulate, and solve engineering problems;
- (f) An understanding of professional and ethical responsibility;
- (g) An ability to communicate effectively;
- (h) The broad education necessary to understand the impact of engineering solutions in global and societal contexts;
- (i) A recognition of the need for, and an ability to engage in, life-long learning;
- (j) A knowledge of contemporary issues;
- (k) An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice;
- (l) An understanding of issues related to minorities and gender diversity, society and culture, and an historical awareness of Africa and its Diaspora;
- (m) A thorough grounding and working knowledge of advanced chemistry;
- (n) An understanding and working knowledge of the safety and environmental aspects of chemical processes and practices.

ACADEMIC POLICIES, HONORS AND DEGREE REQUIREMENTS

This information has been prepared as a convenience for undergraduate Chemical Engineering students and their faculty advisors. **It is not intended to replace the Howard University Bulletin that is the official University publication on all matters concerning academic policy.** Students and their faculty advisors are encouraged to become familiar with information contained in the Howard University Bulletin and with information presented on the Howard University web site. Students are also encouraged to consult *The H-Book*, which is an official publication of the Office of Student Activities. The H-Book serves as a general resource for all Howard University Students.

Faculty Advisors

Students in the Department of Chemical Engineering are assigned a faculty advisor at the beginning of their first semester in residence. Students are required to consult with their faculty advisors on a regular basis on all academic matters and career objectives. During registration, each student's advisor is provided with an alternate PIN number which the student will need in order to register for their courses. This PIN will only be provided to the student by their advisor after consultation on, and approval of, courses they should register for in the following semester. Faculty advisors maintain an academic check sheet for their advisee's in order to monitor student progress and adherence to all pre-requisite, co-requisite and program curricular requirements, and it is the student's responsibility to ensure that they are following the program.

Transfer students are also assigned an advisor when they are accepted into the program. It is the student's responsibility to ensure that all courses that have been taken at other institutions meet the department requirements and have been accepted by the advisor to be part of the student's academic record for graduation.

Transfer Credit

Transfer credit is awarded after review of official transcripts from all of the student's previous institutions by the Department of Chemical Engineering. Courses for which transfer credit is given must be equivalent to Howard University courses in content, prerequisites, co-requisites, and credit hours. No credit will be transferred for courses that do not meet the prerequisites of courses in the chemical engineering curriculum at Howard University. Only courses in which a grade of "C" or better was obtained at an accredited institution are transferable. Credits for some courses offered by the College of Arts and Sciences are transferable from international institutions if those courses have been evaluated by the University and are considered equivalent to courses offered at Howard University. The Department also transfers credit for Advanced Placement level courses if the score meets the requirements set by the department at Howard University that offers a similar course. To establish this, the student must provide official course descriptions and other supporting documentation, including a current University Catalog (or web-based course description) from all institutions in which transfer credit is requested. Applications for transfer credit may be obtained from the office of the Department of Chemical Engineering.

Consortium Courses

Howard University offers its qualified undergraduate and graduate degree students the opportunity to enroll in courses in the Washington Metropolitan Area Consortium of Universities (WMACU), including Catholic University, Georgetown University, George Washington University, Trinity College, the University of Maryland, George Mason University and the University of the District of Columbia. Courses to be pursued through the Consortium must be courses that are not available at Howard University during the given semester or year. Details concerning enrollment in consortium courses are contained in the Howard University Student Reference Manual and Directory of Classes available on the Web each semester.

Dean's Honor Roll

Students with a grade point average of at least 3.0 based on a minimum load of 14 credits for the semester will have their names placed on the Dean's Honor Roll.

Attendance Regulations

All students are expected to attend classes regularly and promptly. Students who are absent from classes or laboratory periods are responsible for the entire work of the course. Members of the faculty may hold students responsible for regular and prompt class attendance. Individual faculty may also include attendance and class participation as a component of the grade received for the course.

Any student who does not take a scheduled mid-term or final examination must provide medical or official athletic reasons in writing in order to obtain the approval of his or her instructor to take a substitute examination. A student who does not secure such approval will receive a grade of zero for the examination missed.

Faculty members are responsible for reporting to the Assistant Dean of the College of Engineering, Architecture and Computer Sciences the names of students whose repeated absences or tardiness are, in their opinion, impairing the student's work. In such cases, the Assistant Dean will take appropriate action, which may include withdrawing the student from the course.

Academic Suspension and Readmission

The Department of Chemical Engineering adheres to the policy published by the University. Details concerning academic probation, suspension and readmission after suspension are published in the *Howard University Bulletin* and in the *Student Reference Manual* and *Directory of Classes*.

Graduation

Students must be recommended for graduation by the faculty of the College of Engineering, Architecture and Computer Sciences. Formal applications for graduation are required. Application forms may be obtained from the Office of the Assistant Dean, Room 1114 LKD Hall. Application should be made approximately seven months in advance of the anticipated date of graduation. A copy of this application must be submitted to the Chemical Engineering Department Office for filing. If a student does not graduate when expected, the student must reapply for graduation.

All students should consult with their advisors or with the Chair of the Department of Chemical Engineering prior to the published deadline to add courses for the fall semester of the academic year in which they plan to graduate. This is imperative in order to assure that their proposed program of study will allow them to meet all academic requirements for graduation in that academic year.

Accreditation Requirements Regarding Course Prerequisites

Students enrolled in the Chemical Engineering Program must follow the curriculum published by the department. The student's advisor and the Chair of the department must approve any deviation from the published curriculum, and it must be consistent with current curriculum criteria set by the Accreditation Board for Engineering and Technology (ABET).

The ABET curriculum criteria requires a systematic progression through the curriculum by students enrolled in the program. This means that all students must complete lower level courses and satisfy prerequisite course requirements prior to enrolling in upper level courses. Prerequisites and co-requisites for courses in the chemical engineering curriculum are listed in

this handbook. Students should also be aware that the following procedures will be followed to enforce and ensure compliance with current pre-requisite and co-requisite requirements:

1. Following each General Mandatory Registration, the course schedule of each student will be reviewed by his/her department. Students will be “withdrawn” from classes for which they do not have the proper pre-requisites or co-requisites.
2. At the beginning of each semester, instructors in CEACS will require each student to complete a pre-requisite/co-requisite survey for his/her class. Students who do not complete and sign the survey or do not have the required pre- and co-requisites will be “withdrawn” from the class.

Social Science, Humanities and Afro-American Studies Requirements

In the interest of making engineers fully aware of their social responsibilities and better able to consider related factors in decision-making processes and to be broadly educated, course work in the humanities, social sciences and Afro-American studies is required as an integral part of the chemical engineering program. Students must include courses at both a lower level and an advanced level and may not limit selections to unrelated introductory humanities and social science courses. *Therefore, all students should consult closely with their faculty advisors to be certain that these requirements are met.*

Social science and humanities electives are offered primarily through the College of Arts and Sciences, although some electives may be selected from course offerings of the Schools of Education and Business. It is important to remember that *all social science and humanities elective sequences require the approval of the student’s major department.*

Each student must complete at least 15 credits in the social science/humanities areas as follows:

1. Complete three credit hours (one course) per the University requirements in Afro-American studies. Examples are provided in Table 1 and each semester the Schedule of Classes includes a listing of courses that will satisfy this University requirement.
2. Choose either the “Literature” or Non-Literature” area from the Humanities elective in Table 2 and select six credits (two courses) from that area. Three credits must be at the lower level and three credits must be at the upper level as indicated in Table 2.
3. Select an option consisting of six credit hours (two courses) from the Social Science Options listed in Table 3. These two social science courses must consist of a sequence that represents a lower level and an upper level social science elective that would comprise a social science sequence of study.

Any exceptions to the above must be requested in writing to the Chair of the Department for consideration and must be approved prior to enrollment in the course(s).

1. Afro-American Studies Requirement (One Course Required)

Table 1: Afro-American Studies Options

HIST-005 or HIST-006	Intro to the Black Diaspora
ENGL-150	Afro-American Lit I
ENGL-151	Afro-American Lit II
AFRO-005	Intro to Afro-American Studies I
AFRO-006	Intro to Afro-American Studies II
POLS-168	Pan-Africanism
MUTP-100	Blacks in the Arts

2. Humanities Requirements (Two Courses Required, Lower and Upper Level, With Either Literature or Non-Literature Emphasis)

Table 2A: Humanities Literature Emphasis Options

Humanities Literature Emphasis Lower Level Course Elective Options

CLAS-101	Greek Literature in English
CLAS-102	Roman Literature in English
CLAS-108	Greek Drama
CLAS-109	Classical Mythology
CLAS-113	Women in the Ancient World
ENGL-050	Introduction to Poetry
ENGL-151	Intro to Prose Fiction
ENGL-142	Major English and American Writers
ENGL-143	Intro to General Literature
ENGL-054	Afro-American Literature I
ENGL-055	Afro-American Literature II
FREN-100	Francophone Literature in English
RUSS-100	Russian Short Stories
RUSS-101	Literature of Revolution
SPAN-100	Hispanic Literature in English
CLAS-016	Literature of the Ancient World
HUMA-015	Literature of the Modern World

Humanities Literature Emphasis Upper Level Course Elective Options

CLAS-114	Lyrics Poetry in Classical Antiquity
ENGL-053	Highlights in Afro-American Literature
ENGL-107	Women in Literature
GREM-101	Literature of Love
ENGL-168	Modern Caribbean Literature
CLAS-014	Introduction to Humanities I

CLAS-015	Introduction to Humanities II
ENGL-014	Introduction to Humanities I
ENGL-015	Introduction to Humanities II

Table 2B: Humanities Non-Literature Emphasis Options

Humanities Non-Literature Emphasis Lower Level Course Elective Options

GERM-100	Individual and Society
GERM-109	Northern Myths and Legends
GERM-111	Classics Films in English
GERM-109	Slavic Mythology

Humanities Non-Literature Emphasis Upper Level Course Elective Options

CLAS-103	Classical Art
CLAS-111	Satire and Comedy in the World
ENGL-052	Introduction to Drama
MUSC-100	Intro to Music
MUTP-100	Blacks in the Arts
ARTH-161	Art Appreciation
THAC-010	Introduction to the Theatre
FREN-106	Francophone Film

3. Social Science Requirements (Two Courses Required)

Table 3: Social Science Lower/Upper Level Sequence Options

CLAS-104	Greek Civilization
CLAS-105	Roman Civilization
HIST-001	Introduction to Civilization I
HIST-002	Introduction to Civilization II
HIST-005	Black Diaspora I
HIST-006	Black Diaspora II
SOSC-011	Social Science I
SOSC-012	Social Science II
HIST-101	World Geography
HIST-102	Economic Geography
RUSS-145	Russian Culture I
RUSS-146	Politics of Culture

AFRO-005	Afro-American Studies I
AFRO-006	Afro-American Studies II
HIST-003	Europe and the Wider World I
HIST-004	Europe and the Wider World II
HIST-030	Intro to African History I
HIST-031	Intro to African History II
HIST-040	Intro to the History of Latin America and the Caribbean I
HIST-041	Intro to the History of Latin America and the Caribbean II
HIST-050	Intro to Europe History I
HIST-051	Intro to Europe History II
ANTH-001	Anthropology
ANTH-160	Intro to Cultural Anthropology
SOCI-001	Intro to Sociology
SOCI-160	Sociology of African Americans
POLS-001	Intro to Political Science
POLS-006	Pan-Africanism
ECON-001	Principles of Economics I
ECON-002	Principles of Economics II

Please note that the approved courses in the African-American Studies Cluster are always listed in the STUDENT REFERENCE MANUAL and DIRECTORY OF CLASSES.

Physical Education Requirements

Undergraduate students are required to complete two courses in Physical Education.

If in doubt about any information contained herein, students should consult the Howard University Bulletin and/or their Advisor. The final responsibility for the fulfillment of all requirements for the degree lies with the student. Academic clearances for the degree BSChE will be issued by the Department of Chemical Engineering if and only if the candidate for graduation has satisfied all published requirements for the degree. The Department of Chemical Engineering will not consider exceptions to these requirements.

**CHEMICAL ENGINEERING CURRICULUM
HOWARD UNIVERSITY**

The Chemical Engineering Curriculum contained in this Handbook is designed for students to complete the program in four years.

FRESHMAN YEAR

Fall Semester

EGPP-101	Introduction to Engineering	3
MATH-156	Calculus	4
CHEM-003	General Chemistry Lecture I	4
CHEM-005	General Chemistry Lab	1
ENGL-002	English	3
-----	Elective (Humanities/Soc. Sci.)	3
	TOTAL	18

Spring Semester

CHEG-102	Introduction to Chemical Engineering	3
MATH-157	Calculus II	4
CHEM-004	General Chemistry Lecture II	4
ENGL-003	English	3
-----	Elective (Humanties/Soc.Sci.)	3
-----	ROTC or Physical Education	1
	TOTAL	18

**CHEMICAL ENGINEERING CURRICULUM
HOWARD UNIVERSITY**

SOPHOMORE YEAR

Fall Semester

PHYS-013	Physics I Lecture	3
PHYS-023	Physics I Laboratory	1
MATH-158	Calculus III	4
CHEM-141	Organic Chemistry Lecture	3
SYCS-165	Elementary Computation	3
CHEG-201	ChE Calculations I	3
	TOTAL	17

Spring Semester

PHYS-014	Physics II Lecture	3
CHEM-145	Organic Chemistry Lab	3
MATH-159	Differential Equations	4
CHEM-142	Organic Chemistry Lecture	3
CHEG-202	ChE Calculations II	3
-----	ROTC or Physical Education	1
	TOTAL	17

**CHEMICAL ENGINEERING CURRICULUM
HOWARD UNIVERSITY**

JUNIOR YEAR

Fall Semester

CHEM-171	Physical Chemistry Lecture I	3
CHEM-173	Physical Chemistry Laboratory	2
CHEG-301	Unit Operations I	3
CHEG-303	ChE Thermodynamics	3
EECE -310	Principles of Electronics	2
-----	Elective (Humanties/Soc.Sci.)	3
	TOTAL	16

Spring Semester

CHEM-172	Physical Chemistry Lecture II	3
CHEG-302	Unit Operations II	3
CHEG-306	ChE Analysis	3
CIEG -202	Statics	3
-----	Elective (Technical)	3
	TOTAL	15

**CHEMICAL ENGINEERING CURRICULUM
HOWARD UNIVERSITY**

SENIOR YEAR

Fall Semester

CHEG-401	Unit Operations III	3
CHEG-407	Process Design I	3
CHEG-405	ChE Laboratory	3
CHEG-403	ChE Kinetics and Reactor Design	3
-----	Elective (Engineering)	3
	TOTAL	15

Spring Semester

CHEG-402	Process Control	3
CHEG-414	Process Design II	3
-----	Elective Course (ChE)	3
-----	Elective (Humanities/Soc.Sci.)	3
-----	Elective (Humanities/Soc.Sci.)	3
	TOTAL	15

TOTAL CREDITS REQUIRED FOR BSCHE: 131

CHEMICAL ENGINEERING DEPARTMENT COURSE PRE- AND CO-REQUISITES
Howard University, Undergraduate Curriculum

REQUIRED CHEMICAL ENGINEERING MAJOR COURSES

Course	Title	Cr	Pre-Requisites	Co-Requisites
EGPP-101	Intro to Engineering	3	-----	
CHEG-102	Intro to ChE Design	3	CHEM 003	
CHEG-201	Calculations I	3	MATH 156	MATH 157
CHEG 202	Calculations II	3	ENGL 003, CHEG 201, MATH 157;	
CHEG-301	Unit Operations I	3	CHEG 202, PHYS 013;	
CHEG-302	Unit Operations II	3	CHEG 301, MATH 159;	
CHEG-303	ChE Thermodynamics	3	CHEG 202, PHYS 013;	
CHEG-306	ChE Analysis	3	CHEG 301, MATH 159, SYCS 165;	
CHEG-401	Unit Operations III	3	CHEG 302, 303, CHEM 171;	
CHEG 402	Process Control	3	PHYS 014, CHEG 306 or Perm of Inst;	
CHEG-403	ChE Kinetics	3	CHEG 303, CHEM 141, 171, MATH 159; CHEG 302	
CHEG 405	ChE Laboratory	3	CHEM 173 OR CHEM 145;	CHEG 401
CHEG-407	Process Design I	3	CHEG 302, 303, CHEM 171;	CHEG 401
CHEG 414	Process Design II	3	CHEG 401, 403, 407, CHEM 142, 172;	
CHEG-xxx	ChE Tech Elective	3	Variable Pre-req; perm of instructor	
<u>SUB-TOTAL</u>		45		

REQUIRED ENGINEERING COURSES (FOR CHE)

Course	Title	Cr	Pre-Requisites	Co-Requisites
SYCS 165	Elem. Comp.	3	-----	
EECE 310	Prin. of Electronics	2	MATH 159; PHYS 014	
CIEG 202	Statics	3	MATH 157, PHYS 013	
xxEG xxx	Engineering Elective	3	Variable Pre-req; perm. of instructor	
xxxx-xxx	Eng./Tech Elective	3	Variable Pre-req; perm. of instructor	
<u>SUB-TOTAL</u>		14		

CHEMICAL ENGINEERING DEPARTMENT COURSE PRE- AND CO-REQUISITES
Howard University, Undergraduate Curriculum

REQUIRED SCIENCE AND MATH COURSES

Course	Title	Cr	Pre-Requisites	Co-Requisites
CHEM 003	General Chem Lecture I	4	-----	
CHEM 004	General Chem Lecture II	4	CHEM 003	
CHEM 005	General Chem Lab I	1	-----	
CHEM 141	Organic Chem Lecture I	3	CHEM 004	
CHEM 142	Organic Chem Lecture II	3	CHEM 141	
CHEM 145	Organic Chem Lab	3		CHEM 141 OR 142
CHEM 171	Physical Chem Lecture I	3	CHEM 004; MATH 159	
CHEM 172	Physical Chem Lecture II	3	CHEM 171	
CHEM 173	Physical Chem Lab I	1	-----	CHEM 171
MATH 156	Calculus I	4	Acceptable Math Placement Exam	
MATH 157	Calculus II	4	MATH 156	
MATH 158	Calculus III	4	MATH 157	
MATH 159	Differential Equations	4	MATH 157	
PHYS 013	Physics I Lecture	3	-----	PHYS 023
PHYS 014	Physics II Lecture	3	PHYS 013	PHYS 024
PHYS 023	Physics I Laboratory	1		
	<u>SUB-TOTAL</u>	<u>48</u>		

REQUIRED ENGLISH, HUMANTIES AND SOCIAL SCIENCE COURSES

ENGL 002/003	Freshman English	6		
xxxx xxx	African American Studies	3	(See Table 1) Variable Prerequisites	
xxxx xxx	Humanities	6	(See Table 2A and 2B) Variable Prerequisites	
xxxx xxx	Social Science	6	(See Table 3) Variable Prerequisites	
	<u>SUB-TOTAL</u>	<u>21</u>		

REQUIRED PHYSICAL EDUCATION COURSES

PHED xxx	PE	2	Permission of instructor	
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GRAND TOTAL 130

PLEASE NOTE THE FOLLOWING:

The Chemical Engineering Department has a firm policy on enforcing pre-requisite and co-requisite requirements. The Chair of the department may remove any student from a course at any time should a lack of a required pre-/co-requisite be brought to his attention. Prior to dropping any course, all students are required to meet with their advisors to discuss the future ramifications for their educational program.

FACULTY & STAFF DIRECTORY

Department of Chemical Engineering: Administration and Staff

Dr. Ramesh C. Chawla Chair	Room 1007/1009	806-6617	rchawla@howard.edu
Ms. Verna Rice Administrative Assistant	Room 1009	806-6624	vsavannah@howard.edu
Mr. Mario Belizaire Laboratory Manager	Room G-09	806-5627	marbelbo@hotmail.com

Department of Chemical Engineering: Faculty

Dr. Mobolaji E. Aluko Professor	Room 2005	806-4793	maluko@howard.edu
Dr. Joseph N. Cannon Professor	Room 2015	806-6626	jcannon@howard.edu
Dr. Ramesh C. Chawla Professor	Room 2007	806-4794	rchawla@howard.edu
Dr. William E. Collins Associate Professor	Room 1011	806-4595	wcollins@howard.edu
Dr. Kenneth Ekechukwu Adjunct Assistant Professor	Room G-10	806-5627	ela@prodigy.net
Dr. Jason Ganley Assistant Professor	Room 2013	806-4796	jganley@howard.edu
Dr. Robert J. Lutz Visiting Professor	Room 1009	3/435-1944	rlutz@Box-r.nih.gov
Dr. James Mitchell Packard Professor of Material Science	Room 1124	806-9086	jwm@msrce.howard.edu
Dr. M. G. Rao Professor Emeritus	Room 2013	806-6624	mgrao@comcast.com
Dr. John P. Tharakan Professor	Room 2011	806-4811	jtharakan@howard.edu

Research and Teaching Laboratories

H.U. Chemical Energy Research Lab	Room G-05/07	806-6766
Chemical Engineering Shop/Storage	Room G-11	None
Unit Operations Lab	Room G-10	806-5627
Environmental Engineering Research Lab	Room B-15	None
Biochemical Engineering Research Lab	Room B-17	806-5283

Biomaterials & Biopolymers Research Lab	Room B-19	806-5494
Separations Process Research Lab	Room B-21	806-6641

Offices and other Facilities

Conference Room	Room 1005	806-4854
Graduate Room	Room 1010	806-4855
AICHE	Room 1012	806-4693

DEPARTMENT BULLETIN BOARD

The Department of Chemical Engineering keeps a bulletin board in order to maintain contact with students. On the bulletin board you will find the following:

- A listing of faculty advisors for all undergraduate students in the Chemical Engineering Department
- Opportunities for graduate studies at Howard and other institutions
- Job opportunities
- Research opportunities at Howard University and at other institutions.
- Request for students to report to the Department office for important information
- Any other information that is important to students in the Department of Chemical Engineering

It is important that all students in the Department of Chemical Engineering check the bulletin board regularly.

STUDENT ORGANIZATIONS

Student Chapter of the American Institute of Chemical Engineering (AIChE). All students in the undergraduate and graduate program are encouraged to join this organization and participate fully in its activities. The AIChE Office is located in Room 1012 in LKD Hall.

OFFICE OF STUDENT SERVICES

The Office of Student Services (Room 1114 LKD) provides counseling, arranges for tutorial services, coordinates special programs, assists with admission and registration, and maintains students records. Financial aid assistance, the Cooperative Education Program and several special academic programs are also administered by this office.

CODE OF ETHICS OF ENGINEERS

The Fundamental Principles:

Engineers uphold and advance the integrity, honor and dignity of the engineering profession by:

- Using their knowledge and skills for the enhancement of human welfare;
- Being honest and impartial, and serving with fidelity the public, their employers and clients;
- Striving to increase the competence and prestige of the engineering profession; and
- Supporting the professional technical societies of their disciplines.

The Fundamental Canons:

1. Engineers shall hold paramount the safety, health and welfare of the public in the performance of their professional duties.
2. Engineers shall perform services only in the areas of their competence.
3. Engineers shall issue public statements only in an objective and truthful manner.
4. Engineers shall act in professional manners for each employer or client as faithful agents or Trustees, and shall avoid conflicts of interest.
5. Engineers shall build their professional reputation on the merit of their services and shall not Compete unfairly with others.
6. Engineers shall act in such a manner as to uphold and enhance the honor, integrity and dignity of the profession.
7. Engineers shall continue their professional development throughout their careers and shall provide opportunities for the professional development of those engineers under their supervision.