

Department of Chemical Engineering Town Hall Meeting

September 24, 2019

AGENDA:

1. Overview of the CHEG Department
2. Student Advisement
3. Curriculum changes & PEOs
4. Ethics/Academic honesty
5. Opportunities for CHEG students
6. Department/PVAMU pride

Department of Chemical Engineering

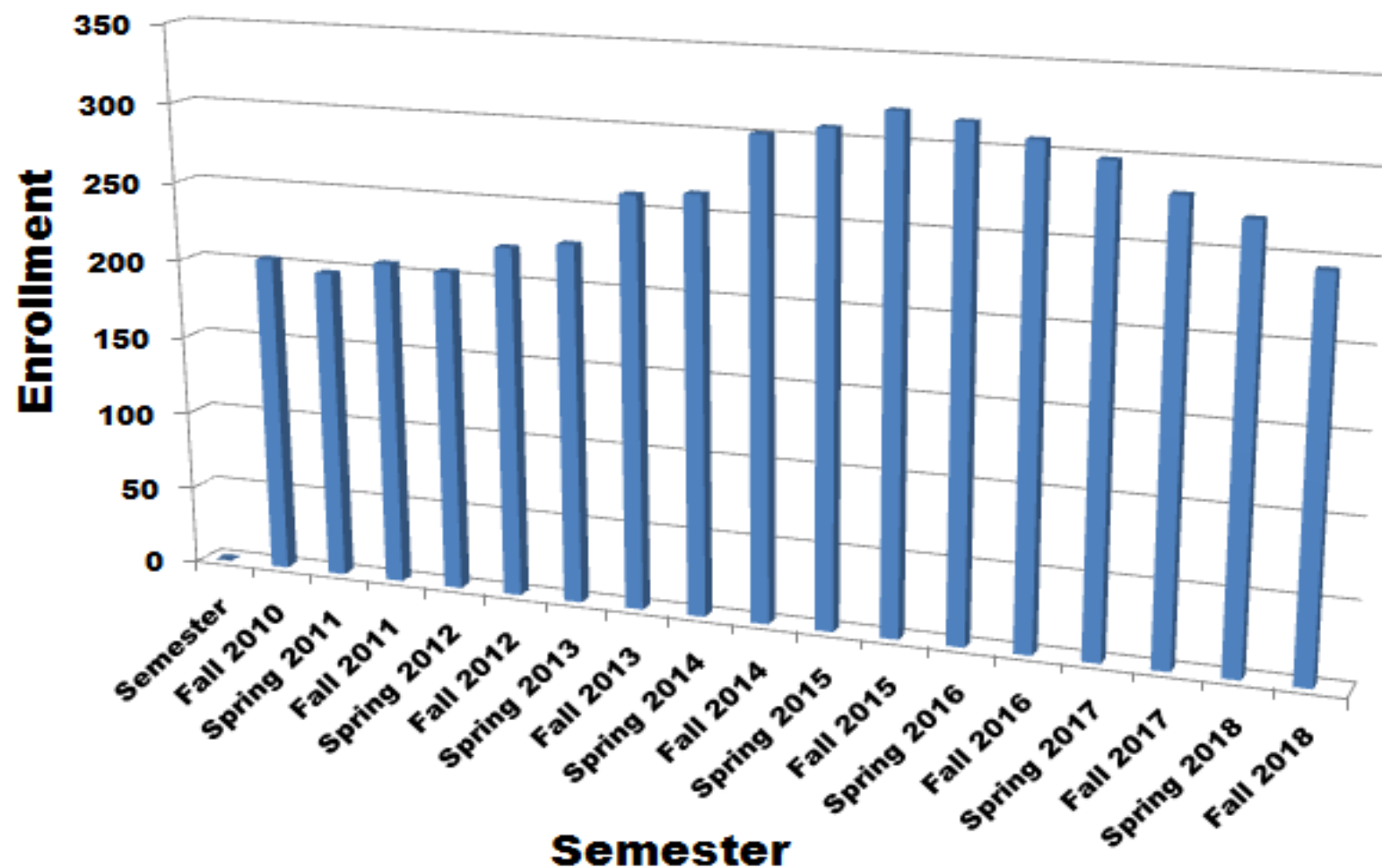
1. Faculty (fall 2019):10

- Professors: **2** ; Associate Professors: **1**; Research Professor: **1**;
Assistant Professors: **4**; Lecturer I: **2**

2. Staff (Fall 2019)

- Senior Laboratory Coordinator 1; Administrative Assistant III: **1**
- Fall 2019 Undergraduate Enrollment: 236
- Faculty to Undergraduate Student Ratio: **1:24** (fall 2019)
- Fall 2019 Graduate Students Enrollment: **1**

Chemical Engineering Enrollment : Fall 2010 - Fall 2018



CHEG Retention Rates

COHORT	% Retention			
	Year 1	Year 2	Year 3	Year 4
2010	75	71	58	50
2011	83	66	55	38
2012	70	61	57	35
2013	57	57	47	40
2014	79	70	58	42

CHEG Graduation Rates

COHORT	% Graduation			
	Year 4	Year 5	Year 6	Year 7
2010	4	38	46	54
2011	14	24	41	41
2012	13	35	43	-
2013	7	33	-	-
2014	15	-	-	-

Department of Chemical Engineering Curriculum

BSCHE Degree Plan

Year 1: Fall (Credit hours: 15)

SUBJ	NUM	TITLE	SCH	TCCN
MATH	1124	Calculus with Analytic Geometry I	4	MATH 2413
CHEG	1011/1021	Intro to Engr., Comp Sci. & Tech./Intro Chem. Engr. Lab.	2	ENGR 1201*
ELEG	1043	Computer Applications in Engineering	3	COSC 1320
COMM	1003	Fundamentals of Speech Communication	3	SPCH 1311
ENGL	1123	Freshman Composition I	3	ENGL 1301

Spring (Credit hours: 16)

SUBJ	NUM	TITLE	SCH	TCCN
MATH	2024	Calculus with Analytic Geometry II	4	MATH 2414
CHEM	1034	Chemistry for Engineers	4	
CHEM	1021	Inorganic Chemistry Laboratory II	1	CHEM 1112
PHYS	2513	University Physics I	3	PHYS 2325
PHYS	2511	University Physics Lab I	1	PHYS 2125
ENGL	1143	Technical Writing	3	ENGL 2311

Summer (Credit hours: 6)

SUBJ	NUM	TITLE	SCH	TCCN
POSC	1113	American Government I	3	GOVT 2305
HIST	1313	U.S. History to 1876	3	HIST 1301

* Houston Community College Course Transfer Numbers.

**CHEM 1033 and 1043 together meet the same requirement as CHEM 1034. Eligibility for CHEM 1034 is established by completing CHEM 1013 or 1033 as a prerequisite, or passing the Chemistry for Engineers Readiness Test.

Department of Chemical Engineering

BSCHE Degree Plan cont'd

Year 2: Fall (Credit hours: 16)

SUBJ	NUM	TITLE	SCH	TCCN
CHEG	2013	Materials Science	3	
CHEG	2053	Material and Energy Balances	3	ENGR 2333*
CHEM	2033	General Organic Chemistry I	3	
PHYS	2523	University Physics II	3	PHYS 2326
PHYS	2521	University Physics Lab II	1	PHYS 2126
MATH	2043	Differential Equations I	3	MATH 2320

Spring (Credit hours: 16)

SUBJ	NUM	TITLE	SCH	TCCN
CHEM	2043	General Organic Chemistry II	3	
CHEG	2003	Economic Analysis and Technical Applications	3	ENGR 2308*
CHEG	2043	Chemical Engineering Thermodynamics I	3	ENGR 2334*
ELEG	2053	Introduction to Electrical Engineering	3	
CVEG	2454	Statics and Dynamics	4	ENGR 2403*

Department of Chemical Engineering

BSCHE Degree Plan cont'd

Year 3: Fall (Credit hours: 15)

SUBJ	NUM	TITLE	SCH	TCCN
MATH	3023	Probability and Statistics	3	
CHEM	3413	Physical Chemistry I	3	
CHEG	3013	Heat, Mass, and Momentum Transport	3	
CHEG	3023	Unit Operations	3	
CHEG	3053	Chemical Engineering Thermodynamics II	3	

Spring (Credit hours: 17)

SUBJ	NUM	TITLE	SCH	TCCN
MATH	4173	Advanced Math for Engineers	3	
CHEM	3423	Advanced Chemistry Elective (Physical Chemistry II; Biochemistry etc.)	3	
CHEM	2032	Chemistry Lab Elective (General Organic Chemistry Laboratory I; Gen. Org. Chem. Lab II)	2	
CHEG	3043	Equilibrium Stage Separation Processes	3	
CHEG	3063	Chemical Reaction Kinetics and Reactor Design	3	
CVEG	2073	Professional Development Core Area 1 (Global Development Issues; alternatives include ECON 2003; FINA 2133; HIST 1813, 1823; POSC 2503 etc.)	3	

Department of Chemical Engineering

BSCHE Degree Plan cont'd

Year 4: Fall (Credit hours: 15)

SUBJ	NUM	TITLE	SCH	TCCN
CHEG	4011	Chemical Engineering Laboratory II	1	
CHEG	4033	Process Dynamics and Control	3	
CHEG	4043	Chemical Process Design and Analysis	3	
CHEG	4472	Senior Design and Professionalism I	2	
CHEG	4133	Technical Elective (Process Modeling and Simulation)	3	
HIST	1323	US History 1876 – Present	3	HIST 1302

Spring (Credit hours: 15)

SUBJ	NUM	TITLE	SCH	TCCN
CHEG	4031	Chemical Engineering Laboratory III	1	
CHEG	4103	Technical Elective (Special Topic)	3	
CHEG	4482	Senior Design and Professionalism II	2	
HUMA	1303	Language/Philosophy/Culture Core Area Elective (Introduction to Humanities ; alternatives include ENGL 2153, 2383, 2333; PHIL 2023, 2303; ARCH 2233, 2243; ARTS 2233 etc.)	3	
ARTS	1203	Creative Arts Core Area Elective (Introduction to Visual Arts ; alternatives include DRAM 1103, 2213, 2223; ARCH 1253; ARTS 2283; COMM 2643; MUSC 1313, 1213, 2333, 2343 etc.)	3	
POSC	1123	Texas Government	3	

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Department of Chemical Engineering

BSCHE (Bioengineering Concentration) Degree Plan

Year 1: Fall (Credit hours: 15)

SUBJ	NUM	TITLE	SCH	TCCN
MATH	1124	Calculus with Analytic Geometry I	4	MATH 2413
CHEG	1011/1021	Intro to Engr., Comp Sci. & Tech./Intro Chem. Engr. Lab.	2	ENGR 1201*
ELEG	1043	Computer Applications in Engineering	3	COSC 1320
COMM	1003	Fundamentals of Speech Communication	3	SPCH 1311
ENGL	1123	Freshman Composition I	3	ENGL 1301

Spring (Credit hours: 16)

SUBJ	NUM	TITLE	SCH	TCCN
MATH	2024	Calculus with Analytic Geometry II	4	MATH 2414
CHEM	1034	Chemistry for Engineers	4	
CHEM	1021	Inorganic Chemistry Laboratory II	1	CHEM 1112
PHYS	2513	University Physics I	3	PHYS 2325
PHYS	2511	University Physics Lab I	1	PHYS 2125
ENGL	1143	Technical Writing	3	ENGL 2311

Summer (Credit hours: 6)

SUBJ	NUM	TITLE	SCH	TCCN
POSC	1113	American Government I	3	GOVT 2305
HIST	1313	U.S. History to 1876	3	HIST 1301

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Department of Chemical Engineering

BSCHE (Bioengineering Concentration) Degree Plan-Cont'd

Year 2: Fall (Credit hours: 16)

SUBJ	NUM	TITLE	SCH	TCCN
CHEG	2013	Materials Science	3	
CHEG	2053	Material and Energy Balances	3	ENGR 2333*
CHEM	2033	General Organic Chemistry I	3	
PHYS	2523	University Physics II	3	PHYS 2326
PHYS	2521	University Physics Lab II	1	PHYS 2126
MATH	2043	Differential Equations I	3	MATH 2320

Spring (Credit hours: 16)

SUBJ	NUM	TITLE	SCH	TCCN
CHEM	2043	General Organic Chemistry II	3	
CHEG	2003	Economic Analysis and Technical Applications	3	ENGR 2308*
CHEG	2043	Chemical Engineering Thermodynamics I	3	ENGR 2334*
ELEG	2053	Introduction to Electrical Engineering	3	
CVEG	2454	Statics and Dynamics	4	ENGR 2403*

Summer (Credit hours: 3)

SUBJ	NUM	TITLE	SCH	TCCN
HIST	1323	US History 1876 – Present	3	HIST 1302

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Department of Chemical Engineering

BSCHE (Bioengineering Concentration) Degree Plan-Cont'd

Year 3: Fall (Credit hours: 15)

SUBJ	NUM	TITLE	SCH	TCCN
CHEG	2153	Intro Biochemical Engineering Fundamentals	3	
CHEM	3413	Physical Chemistry I	3	
CHEG	3013	Heat, Mass, and Momentum Transport	3	
CHEG	3023	Unit Operations	3	
CHEG	3053	Chemical Engineering Thermodynamics II	3	

Spring (Credit hours: 18)

SUBJ	NUM	TITLE	SCH	TCCN
MATH	3023	Probability and Statistics	3	
MATH	4173	Advanced Math for Engineers	3	
CHEG	3043	Equilibrium Stage Separation Processes	3	
CHEG	3063	Chemical Reaction Kinetics and Reactor Design	3	
CHEG	2153	Intro to Biotechnology	3	
CVEG	2073	Professional Development Core Area 1 (Global Development Issues; alternatives include ECON 2003; FINA 2133; HIST 1813, 1823; POSC 2503 etc.)	3	

*** Course is not a degree requirement but is suggested to satisfy the prerequisite for CHEG 3153, which requires some background in biology.

Department of Chemical Engineering

BSCHE (Bioengineering Concentration) Degree Plan-Cont'd

Year 4: Fall (Credit hours: 14)

SUBJ	NUM	TITLE	SCH	TCCN
CHEG	4011	Chemical Engineering Laboratory II	1	
CHEG	4033	Process Dynamics and Control	3	
CHEG	4043	Chemical Process Design and Analysis	3	
CHEG	4472	Senior Design and Professionalism I	2	
CHEM	4033	Biochemistry	3	
CHEM	4032	Biochemistry Lab	2	

Spring (Credit hours: 15)

SUBJ	NUM	TITLE	SCH	TCCN
CHEG	4031	Chemical Engineering Laboratory III	1	
CHEG	4153	Bio Engineering	3	
CHEG	4482	Senior Design and Professionalism II	2	
HUMA	1303	Language/Philosophy/Culture Core Area Elective (Introduction to Humanities ; alternatives include ENGL 2153, 2383, 2333; PHIL 2023, 2303; ARCH 2233, 2243; ARTS 2233 etc.)	3	
ARTS	1203	Creative Arts Core Area Elective (Introduction to Visual Arts ; alternatives include DRAM 1103, 2213, 2223; ARCH 1253; ARTS 2283; COMM 2643; MUSC 1313, 1213, 2333, 2343 etc.)	3	
POSC	1123	Texas Government	3	

Department of Chemical Engineering Curriculum Changes & PEOs

Program Educational Objectives (PEOs)

Review of PEOs:

- 1. Achieve success in advanced studies if they so choose, and in pursuing a successful professional career in new and emerging areas, as well as traditional chemical engineering areas;
- 2. Attain leadership roles in professional careers in their field of choice, with high levels of
- competence, ethics and safety consciousness;
- 3. Maintain and raise their level of engineering competence and achievement by engaging in
- lifelong learning.

- The goals and PEOs are publicized on the web at the URL below.
- <http://www.pvamu.edu/cheg/objectives/>

- Send your suggestions for changes to me by email at migyamerah@pvamu.edu.

Department of Chemical Engineering

Research

Area 1: Synthesis, design and characterization of materials

➤ Drs. Reeves, Shamim and Martin

Area 2: Energy: Biofuels;

➤ Drs. Gyamerah, Gabitto, and Martin

Department of Chemical Engineering Research

Area 3: Environmental Sustainability

- Drs. Shakir, Gabitto, Dada, Olanrewaju and Martin

Area 4: Process Design and Simulation, Process Safety, Kinetics and Catalysis

- Drs. Dada, Gabitto, Olanrewaju and Martin

Department of Chemical Engineering

Brief List of Achievements

- Ozem Onye-Franklin and Lasbat Agbaje were recipients of the 2018 MAC-AIChE Scholarship**
- Graduated over 50 BS Chemical Engineering majors a year over since 2015**
- 10 refereed research journal paper have been published by the faculty from 2017 – 2018**
- Four faculty members serve on editorial boards of refereed international journals or serve as peer reviewers of manuscripts for these journals**