

Columbia  
Southern  
University

Student Catalogue 1995-1996

# Columbia Southern University

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## **Student Catalogue**

Columbia Southern University provides equal educational opportunity to all qualified students without regard to race, color, creed, national origin, sex, or qualified disability.

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# From The Chancellor

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## Welcome To Columbia Southern University!

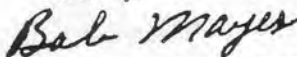
The approach to adult education has changed over the years. It now tends to focus, not so much on what someone has decided we should know, but more on what we already know and how this can be validated. Many students will continue to need traditional curriculum. Others will need class lectures, seminars, and support by face to face tutorials. However, for those individuals who are already achievers in their chosen field, there is a need for a different approach to formalizing their education. CSU offers to those individuals who have already demonstrated competency in their field of study the challenge of being able to validate these accomplishments, and continue to progress with a home study program to receive a college degree.

What is correct for a 19 year old student may well be inappropriate for an experienced professional in his or her 30's, 40's, 50's, or 60's. Therefore, CSU programs take into account what is already known. By taking a highly personalized approach to a degree program, we are confident that the results from such a program will verify that an individual is capable of meeting these requirements in his/her ability to apply this knowledge in an effective and meaningful way. Home study makes it easier for you to achieve your educational goals because it allows you to maintain your current responsibilities to your family and career while you pursue your degree.

We invite those adults who are motivated and will meet the challenge of a "traditional education in a nontraditional way" by means of off campus study.

We look forward to working with you at Columbia Southern University and commend you for pursuing your educational goals.

Sincerely,



Bob Mayes, Ph.D., CECM, CEI

# Statement Of Purpose

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Columbia Southern University is dedicated to helping students:

- Develop the ability to reason objectively, think clearly, and make decisions wisely.
- Increase their ability to apply knowledge and skills in the areas of their chosen professional activities.
- Enhance their capacity and motivation for lifelong inquiry and learning.

To accomplish these goals we:

- Offer education programs in a nontraditional format suited to motivated, mature professionals.
- Provide faculty and advisors with qualified academic backgrounds and successful professional experience who can guide students in managing contemporary challenges.

Columbia Southern University's primary goal is to prepare students to be professionals in their chosen fields by offering a flexible and practical educational process for those mature individuals who have initiative and motivation.

## Mission Statement

The mission of Columbia Southern University is to provide high quality "state of the art" education to students in a nontraditional mode of learning. This mode allows for professionals to have the flexibility to continue to perform in their discipline of expertise while at the same time attaining a comprehensive Degree or Certification in the topical fields of Environmental Engineering, Occupational Safety and Health Engineering, or Business Administration.

# License And Accreditation

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## Authorization

Dr. Joe Miller  
State of Alabama  
Department of Education  
Montgomery, Alabama

Columbia Southern University is licensed with the Department of Education of the State of Alabama and is authorized to issue Bachelor & Master Degrees pursuant to the Alabama Private School License Law, Code of Alabama, Title 16-46 and 1-10.

## Accreditation

Columbia Southern University is actively seeking accreditation through The Accrediting Commission of the Distance Education and Training Council (DETC). The Accrediting Commission of the Distance Education and Training Council is listed by the U.S... Department of Education as a nationally recognized accrediting agency and is a recognized member of the Commission on Recognition of Postsecondary Accreditation (CORPA).

# Distance Education

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## The Distance Education Process

What is distance education?

Primarily, it is the traditional learning process without the required classroom attendance. The purpose of our existence as a university is to allow the student to earn a degree on a much more flexible basis than traditional colleges and universities.

Secondly, the responsibility for your education is shared between you and the university. Credits are awarded for your previous experience and various continuing education programs. You begin the program and set your own pace, study at anytime or place, and finish at your self paced schedule. Your time schedule is not restricted by quarter or semester time frames. Text books are assigned for course work, and you will utilize the resources of your own library, your local library, or nearby college libraries. For those individuals who are highly motivated and goal oriented, your educational program plan may be achieved rather quickly.

Thirdly, it is a directed study program. The academic staff of Columbia Southern University is easily accessible to counsel with you on your educational goals.

## Here's How Home Study Works

Every course to be completed by nontraditional learning will have a syllabus (course outline), a copy of which will be given to you. The syllabus will identify each concept or idea considered to be significant to that particular course. In the syllabus will be found a list of performance based objectives (e.g., list, explain, define, discuss, summarize, identify, etc.,) which, any person knowledgeable in the contents of the course would be expected to be able to perform. You receive credit when you have performed those tasks or objectives. Using the syllabus, the main text, and the resources nearest you, you will research and master the objectives of the course. All assignments and examinations are sent to the University. Once all assignments are completed, a proctored



final examination is administered. After the final exam has been passed, you are sent documentation of completion.

## Personalized Service

The staff at CSU are dedicated to your success. They are always available to help you with information about enrollment, tuition, course shipments, examination grading, transfer credits, graduation requirements and any other questions which may arise. We are only a phone call away.

## Business and Professional Recognition

The true acceptance of any degree will come from voluntary acceptance by the business, professional, and academic community. Students of CSU come from all walks of life and are leaders in business, industry, and in the professions.

Corporations are always seeking ways that would allow personnel to continue their education without losing the productivity of the employee. The courses at CSU have been evaluated and recognized for their educational merit.

## Students' Employers

Akzo Coating	Lockheed Space Operations
Ameritek	Marion Merrell Dow
Anheuser Busch	Martin Marietta
AT&T Bell Labs	Mobil Oil
Baroid Corporation	Naval Aviation Depot
Brooks Instruments	Naval Reserve Readiness
Chevron Pipeline Co.	Command
City of Houston	Neff Perkins Company
County of Livingston	New Pig Corporation
duPont	OSHA, NC
Franklin Medical Center	Parker Hamilton Corporation
Hamilton Beach, Proctor Silex	Precision Scientific, Inc.
IBM Corp.	Seminole Electric
Johnson & Johnson	Shell Oil
Kennedy Space Center	
Kwik Kopy Printing	

# Administration & Faculty

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The Administration and Faculty at CSU are available to assist you throughout the educational process. Please call us if you have any questions.

## Administration

*Bob Mayes*, Ph.D., CECM, CEI  
Chancellor/Chairman of the Board

*M. Ray Curtis*, Ph.D., CECM  
President

*Gale R. Sheehan*, M.S., CECM  
Vice President

*Robert Mayes, Jr.*, B.S., CECM  
Director of Operations

*Thomas Cooley*, B.S., CECM, CEI  
Director of Admissions & Records/Registrar

*Chantell Cooley*, CECM  
Director of Student Services

*Joanna Mayes*  
Director of Student Relations

## Faculty and Staff

Director of Education  
*Gale Sheehan*, M.S.-University of Environmental Sciences  
B.S., Illinois State University

Dean-College of Business Administration  
*M. Ray Curtis*, Ph.D., University of Environmental Sciences

Dean -College of Environmental Engineering  
*Gale Sheehan*, M.S.-University of Environmental Sciences  
B.S.- Illinois State University

Dean-College of Occupational Safety & Health Engineering  
*Bob Mayes*, Ph.D.  
James Madison College of Law

## **Adjunct Faculty**

Professor of Computer Sciences  
*Larry Parks*, M.S.  
University of Southern Mississippi

Professor of Environmental Sciences  
*Richard J. Hoyer*, Ph.D., DES, REP  
Meridian University

Professor of Chemical & Environmental Engineering  
*Nicholas P. Cheremisinoff*, Ph.D., PEA, CHM  
Clarkson College of Technology

Professor of Education  
*Bruce L. Everhart*, Ed.D.  
Syracuse University

Instructor in Hazardous Materials Management  
*James E. Beal*, MBA  
Meridian University

Instructor in Fire Protection Technology  
*Brian L. Smith*, B.S.  
Coring College, NY

Instructor in Business and Accounting  
*Taylor Waite, Jr.*, B.S., C.P.A.  
University of South Alabama

# Admission Information

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## The Admissions Process

Note: To have your applications evaluated at no cost or commitment to enroll, please follow these steps. Once you are notified of the results you may choose to enroll.

### 1. Applications *Complete the enclosed Application.*

A comprehensive application is comprised of all vocational, professional, and academic background achievements. (See **College Credit for Your Experience** following this section).

### 2. Transcripts & Diplomas

Student files must contain Official Transcripts prior to graduation. Student copies of transcripts from previously attended colleges or universities may be provided for evaluation purposes. Submit a copy of your high school diploma or its equivalent.

### 3. Submit to the University

Supply the University with the documents mentioned above. Upon completion of your evaluation you will be notified of the results. At that point, you can make the decision of when to begin the program. Contact the *university and an enrollment agreement will be mailed to you.*

## College Credits for Your Experience

Credit may be given for validated experiential equivalent learning of a postsecondary nature, such as business experience, college level equivalent tests, achievement in a related profession, military training, or other postsecondary level equivalent experience. From this evaluation your Individualized Education Program will be designed. Submit a portfolio documenting your experience with your application for evaluation purposes

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Undergraduate and graduate level credits for prior experience are handled in much the same way as any course from CSU. You are asked to submit a portfolio or other documentation of your experience, which will be evaluated by faculty qualified in the given subject. To receive credit, life experience must:

- Be well documented and deemed equivalent to college level learning by CSU faculty.
- Demonstrate a balance between theory and practice.
- Directly relate to your degree program.
- Be applied toward satisfaction of degree requirements.

You may earn up to 30 credits for life experience. Fifteen of the first 60 undergraduate credits and 15 of your second 60 credits. This means a maximum of the credits given for life experience may not exceed one-fourth of the required credits for a degree. This is in compliance with Distance Education Training Council standards. No fee is charged for this evaluation. If you enroll in a degree program and use credit received from equivalency learning, there is a flat evaluation fee of \$200.

## **Transferring Credits From Other Institutions**

Academic credits will be accepted for transfer from other accredited institutions by having those institutions submit official transcripts to the University. All transcripts are evaluated and grades accepted as they appear on the official transcripts. A minimum grade of "C" in previous coursework is required for credits to be accepted. College credit earned at other institutions through challenge exams or standardized tests may be accepted for transfer. In accordance with the policies of The Distance Education Training Council, a maximum of three fourths of the credits required for a baccalaureate degree may be awarded via transfer credit or a combination of transfer and experiential or equivalent credit. All courses taken at an institution other than Columbia Southern University must be approved for

# Admission Information (cont.)

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transfer by the University. Some courses submitted for transfer may require the submission of course descriptions.

## Credit for Professional License and Credentials

Individuals holding current professional license or certificates may also be eligible to earn college credit. To receive credit for professional credentials, it is necessary to have documents of these credentials evaluated by the University. You will need to submit documentation to the University at the time of application.

## Transferring Credit to Other Institutions

If you wish to transfer credit from Columbia Southern University to another school, please keep in mind that:

- Every school defines its own policy for accepting transfer credits.
- An official transcript of completed coursework must be submitted.

CSU will release official transcripts of academic credits only upon your written request, provided that all financial obligations to the University have been met. Fax or telephone request do not meet federal guidelines for the release of these records.

It may be advisable to contact the institution to which transcripts will be submitted in order to verify acceptance of CSU credits toward completion of that institution's coursework.

## Entrance Requirements

To apply to Columbia Southern University, you must submit proof of a high school diploma or its equivalent (GED) and have official transcripts submitted from all previously-attended academic institutions.

# University Policies

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## Attendance

As a distance education university, CSU has no attendance requirements. However, you are required to maintain your course of study at an ongoing pace, turning in lessons on a regular basis.

## International Applicants

Columbia Southern University welcomes English speaking applicants from abroad, although the University does not provide student visas. All courses are written in English. To ensure you receive your materials promptly and in good order, we must send overseas shipments by air. To cover such costs, a shipping fee is required at the time of enrollment (please see the Financial Information section for more information).

## Policy of Nondiscrimination

Columbia Southern University provides equal educational opportunity and does not discriminate with respect to race, color, religion, national origin, sexual orientation, physical handicap, age, marital status, sex or status as a disabled veteran.

## Academic Calendar

The University operates with an "open-entry, open-exit" admissions and enrollment policy. The academic year is not broken up into semesters or quarters. University hours are Monday through Friday from 8:00 a.m. to 5:00 p.m. (Central Standard Time). CSU is closed on certain holidays.

## Course Scheduling

Because our academic calendar is not divided into traditional semesters or quarters, you may register for courses throughout the year. This flexible scheduling enables you to focus on one or two courses at a time and still progress at a reasonable rate. Most people find that being able to

# University Policies (cont.)

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concentrate on fewer courses at one time better suits their learning style. No more than two courses are to be taken at any one time.

## Grading Policies

Columbia Southern University uses a traditional A through F grading system for academic courses. Grades are defined as follows:

<u>Grade</u>	<u>Quality</u>	<u>Grade Points</u>
A	Excellent	4
B	Good	3
C	Average	2
D	Passing	1
F	Failing	0
W	Withdrawal	0

The grade-point average is computed by dividing the total number of grade points by the total number of credits for which grade points are assigned.

## Transcripts

A transcript bearing the University seal and signature of the Registrar is an official copy of your permanent academic record. You may obtain a transcript through written request. In order to receive transcripts all administrative and financial obligations must be met and any transcript fees paid. Please allow one to two weeks for delivery.

## Examination Proctoring

All final examinations are administered by an approved proctor. The proctor shall be a reputable third party. The proctor must be a responsible individual presenting no conflict of interest with your professional or academic progress. A proctor may be a librarian, counselor, school official, Education Director, etc. The proctor will verify a picture I.D. with name and social security number, at the



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time of testing and will enforce testing procedures. Your examination will be sent directly to the proctor and will be given at a prearranged time and place. Your proctor verifies that the examination was taken honestly and returns the examination and answer sheet to the University for grading. Falsifying proctor information will result in invalidation of an examination and may be cause for termination.

A Proctor Information form will be included with course materials. Once you have selected a qualified proctor, have the proctor complete the proctor form and submit it to the University. Upon approval the University will mail your examination to the proctor and notify you. Allow at least two weeks for this process.

## **Academic Progress**

You are given a maximum of 90 days for each course. Failure to complete course requirements in the allotted time will result in probation or termination. If more time is needed, you may request an extension. It is important that you contact the University if you begin to fall behind, so that lack of academic progress does not become a problem.

## **Academic Probation**

All degree courses are required to be finished within 90 days. You will be placed on academic probation if a 90 day period occurs during your enrollment in a degree program in which no examination has been received by the University. Students on probation are not in good standing. Failure to send in a lesson within 60 days of being placed on probation may result in termination.

# University Policies (cont.)

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## Leave of Absence

If faced with a medical emergency or personal crisis, you may request a leave of absence. A letter must be submitted to the University stating the nature of the illness (from your physician) or crisis and the amount of time needed. A leave of absence may not exceed six months. You may submit a written request to the Student Accounts Department to have all financial obligations suspended during your absence.

## Withdrawal

You may withdraw from a course at any time. To do so, you must submit a written withdrawal request to the University.

## Dismissal or Termination of Enrollment

The College Reserves the right to terminate your enrollment for any of the following reasons:

1. If you have not completed your coursework in the allotted time and have not filed for an extension, you will be terminated.
2. Non-payment. If you do not make your scheduled program payments and do not respond to past-due notices, you will be terminated. The added cost for collecting delinquent accounts will be added to your account. All fees and outstanding balances must be paid prior to reinstatement.
3. Falsifying information. If you intentionally falsify information on your application or any other University document, you will be subject to immediate termination.
4. Cheating. Cheating on any lessons, projects, or examinations will be cause for immediate termination.

## Cancellation and Refund Policy

A student may request cancellation in whatever manner. Upon cancellation, all money due the student must be refunded within 30 days.

- a. An enrollment may be canceled by an applicant student within five (5) calendar days after midnight of the day on which the enrollment agreement is signed
- b. From five (5) calendar days after midnight of the day on which the enrollment agreement is signed and until the time the school receives the first completed lesson assignment from the student, upon cancellation, the school is entitled to a registration fee of \$150.
- c. After the school receives the first completed lesson assignment and until the student requests cancellation, the school shall be entitled to the registration fee and the following charges:
  1. Up to and including completion of the first 10% of the program, 10% of the tuition minus the amount of the registration fee.
  2. After completing more than 10% of the program and up to and including completion of 25% of the program, 25% of the tuition minus the amount of the registration fee.
  3. After completing more than 25% of the program and up to and including completion of 50% of the program, 50% of the tuition minus the amount of the registration fee.
  4. If the student completes more than half of the program, the school shall be entitled to the full tuition.

*The amount of the program completed shall be the completed lesson assignments received for service by the school as compared to the total lesson assignments in the program.*

# Other Information

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## Job Placement Assistance

Columbia Southern University does not provide formal job placement assistance.

## Tax Deductible Tuition

Your educational costs may be tax deductible if the education is used for improving skills required in current employment.

## Appeals & Grievances

Any questions or concerns regarding the University or its policies should be directed to the President's office. If you feel you have been wrongfully dismissed or terminated, you may submit a formal appeal to the University.

# Financial Information

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## Tuition & Fees

Tuition fees include the cost of textbooks, study guides, workbooks and academic support.

### Certification Programs

\$595.00

Certified Environmental Compliance Manager (CECM)

Certified Ergonomics Compliance Director (CECD)

Both of the above certifications require an annual retesting fee of \$165.00.

### Bachelor's Degree Programs

Application Fee	\$0.0
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Enrollment Fee	\$35
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Tuition per credit hour	\$100
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### Master's Degree Programs

Application Fee	\$0.0
-----------------	-------

Enrollment Fee	\$35
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Tuition per credit hour	\$150
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## Methods of Payment

All payments must be in U.S. currency. The University accepts the following methods of payment:

1. Money Order.
2. Visa, Master Card, American Express
3. Employer purchase order.
4. Check (there will be a \$25.00 service charge for any returned checks).

## Degree Program Payment Plans

### Interest Free Plans

The University will finance your tuition amount for up to 6 months interest free with a minimum down payment of \$500.

# Financial Information (cont.)

Company Purchase Orders are accepted for payment of tuition. The tuition amount may be paid monthly for up to 6 months interest free with a down payment of \$500..

## Simple Interest Payment Plans

To help with the cost of tuition, CSU has payment plans for all degree programs. All payment plans require the receipt of the down payment upon enrollment. The first monthly payment will be due at the first of each month at least one month after the enrollment date.

Minimum Down Payment For Degree Programs is \$500.00

The total cost of a degree program depends upon how many credit hours are required. Following is a common scenario: Bachelor's - 30 credits for life experience, all lower level courses transferred in, and 30 credits taken at CSU. Master's - 6 credits for life experience and 30 credits taken at CSU.

### Bachelor's Degree Tuition Payment Plan Examples

Evaluation Fee	\$200.00
Enrollment Fee	\$35.00
Tuition: 30 Credits @ \$100.00	<u>+\$3000.00</u>
Total Course Cost	\$3235.00
Less Down Payment	<u>-\$500.00</u>
Total Financed	\$2735.00

	<i>Plan 12</i>	<i>Plan 18</i>	<i>Plan 24</i>
Tuition Financed	\$2735.00	\$2735.00	\$2735.00
Finance Charge	\$150.70	\$222.02	\$294.19
Annual Percentage Rate	10%	10%	10%
Deferred Payment Price	\$2885.70	\$2957.02	\$3029.19
Monthly Payment Amount	\$240.47	\$164.28	\$126.22
Number of Monthly Payments	12	18	24

### Master's Degree Tuition Payment Plan Examples

Evaluation Fee	\$200.00
Enrollment Fee	\$35.00
Tuition: 30 Credits @ \$150.00	<u>+\$4500.00</u>
Total Course cost	\$4735.00
Less Down Payment	<u>-\$500.00</u>
Total Financed	\$4235.00

	<i>Plan 12</i>	<i>Plan 18</i>	<i>Plan 24</i>
Tuition Financed	\$4235.00	\$4235.00	\$4235.00
Finance Charge	\$233.35	\$343.78	\$455.53
Annual Percentage Rate	10%	10%	10%
Deferred Payment Price	\$4468.35	\$4578.78	\$4690.53
Monthly Payment Amount	\$372.36	\$254.38	\$195.44
Number of Monthly Payments	12	18	24

## Student Expenses

Tuition covers all course materials and student services. However, you may encounter fees for the following items:

Foreign Shipping: \$50 per course is normal rate.

Note: Shipping charges may vary due to location. For an exact shipping charge ask your advisor before enrollment and it will be added to your enrollment agreement.

Domestic Shipping	For special shipping request only.
Extensions	\$50.00
Graduation	\$75.00
Retesting Fees	CSU allows three attempts to pass final examinations. You will be charged a re-testing fee for second and third time of \$50.00
Returned Checks	\$25.00
Change of Program Fee	\$100.00
Evaluation Fee	\$200.00
Additional Transcripts	\$5.00(three at no charge)

# Certification Program

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## Education Never Ceases

You've completed your requirements for a degree in your chosen field of occupation. Is this enough to insure your continued position in the corporate structure?

In the environmental and safety field, the answer is, "NO"!

Education, both formal and informal, is an ongoing duty. We need it to keep our knowledge and professional skills sharp and proficient.

In the past, most people viewed the environment as a beautiful scene on the highway or an ocean sunset, but not all of the rules, regulations, and procedures that have been passed help insure that these scenes continue to be there for our pleasure. These new challenges passed by the state, local, and federal governments will cause us to go beyond our daily jobs to involve ourselves in an ongoing self educational program.

There are many workshops, conferences, and seminars to help us with education. The problem is in taking so much time off from our jobs. The next alternative is to take an organized home study program which normally results with a certification of your completion.

A college degree earned years ago, especially in the technology and science fields, is normally inadequate in today's demands. Continuing education, along with active participation in industry organizations, may be the ongoing channel for constantly updating ourselves and avoiding getting stuck with old ideas and outdated methods.

With industry professionalism on the rise, credible professional designations are more important than ever before. Graduation from these programs can lead to job advancement and higher pay.

In addition, if you've reached a low burn out point, continuing education is a self motivator.



Those who aren't convinced will be left behind. Experts suggest that the totality of knowledge is now doubling every three to four years. By the end of this decade, up to seventy five percent of the work force will need to be retrained.

The Hard Fact for all of us is crystal clear. It's time to hit the books!!!

Now about that certification ...

## **Benefits of Certification Training**

- Provides additional income and professional recognition in your present position.
- Allows middle, supervisory, and top management personnel to obtain professional credentials in a nonresident study program.
- Obtain the special skills and knowledge mandated by OSHA regulations and required by every business management team affording new responsibilities.
- Increases your productivity and worth as a manager to your employer because you represent the company as a credible, authoritative professional when OSHA officials perform an inspection at your company site.
- Most importantly, you earn the professional skills, credentials, and recognition it takes to be successful in one of the fastest growing professions today.

## **Certified Environmental Compliance Manager (CECM)**

*(partial content listing)*

Module 1            CECM 200

Section I Hazard Communication Overview

Section II Identifying Hazardous Materials

    Hazard Determination

    Health Hazards

    Physical Hazards

    Hazardous Material Inventory

    Exemptions

# Certification Program (cont.)

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- Maintaining Your List
- Suggested Format of List
- Chemical Storage
- Chemical Incompatibilities
- Section III Material Safety Data Sheets
  - Responsibilities of Employers
  - Responsibilities of Manufacturers & Importers
  - Responsibilities of Distributors
- Section IV Labeling
  - Requirements
  - What Information Must be on a Label
  - Exemptions
  - Label Types
  - Sample Labels
  - NFPA 704 Placarding
  - Label Request Letter
- Section V Information and Training
  - Requirements
  - General Training Factors
  - Training Documentation
  - Outside Contractors
  - Personal Protective Equipment
- Section VI Chemical Awareness
  - The Employees Right To Know
  - Product Labels and MSDS
  - Handling Hazardous Materials
  - Storage and Mixing of Hazardous Materials
  - Spill Clean Up and Disposal
  - Exposure and First Aid Procedures
  - Fire and Explosion Data
- Section VII Written Hazard Communication Standard
  - Required Information
  - Sample Program
- Section VIII The Code of Federal Regulations
  - How to Read the CFR
  - CFR Title Listing

- (New) Institute of Technology
- 
- Module 2            CECM 250**
- Section I Lockout/Tagout**
- Background
  - HECP Requirements
  - Hazardous Energy Sources
  - Purpose of Tags
  - Lockout/Tagout Devices
  - Lockout/Tagout Procedures
  - Removal of Devices
  - Special Lockout/Tagout Procedures
    - Group Procedures
    - Outside Contractors
    - Shift/Personnel Changes
  - Lockout/Tagout Inspections & Audits
  - Employee Training
    - Affected Employees
    - Authorized Employees
  - Employee Retraining
- Section II Respiratory Protection**
- Requirements for Respiratory Program
  - Respiratory Hazards
    - Dusts, Mists, Fumes
    - Gases and Vapors
    - Oxygen Deficiency
  - Selection of Respirators
    - Disposable Mask
    - Half Mask
    - Full Face Mask
    - Supplied Air Respirator
  - Use of Respirators
    - Training
    - Maintenance and Care of Respirators
    - Respiratory Protection Regulations
- Section III Fire Prevention Planning**
- Elements for Fire Prevention Plan
  - Fire Response Procedures
  - Response Procedures for Employees
  - Fire Evacuation Procedures
  - Major Fire Hazards
    - Flammables
    - Explosives
    - Combustibles

# Certification Program (cont.)

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- How to Work With Fire Hazards
- Fire Hazard Classification
- Causes for Industrial Fires
- Fire Extinguishers
- Good Housekeeping
- Static Electricity
- Treatment of Burns
- Training

- Section IV Bloodborne Pathogens
  - Who is Covered
  - Exposure Control Plan
  - Who Has Occupational Exposure
  - Communicating Hazards to Employees
  - Preventive Measures
  - Universal Precautions
  - Personal Protective Equipment
  - Housekeeping
  - Labeling
  - Table 1 Labeling Requirements
  - What to do if an Exposure Incident Occurs
  - Recordkeeping
  - HIV & HBV Research Laboratories / Production

- Module 3 CECM 325
  - Section I Definition of Hazardous Waste
  - Section II Responsibility
    - Managing Your Hazardous Waste
    - How to Determine Total Waste
    - Obtaining an EPA Number
  - Section III Appendix
  - Section IV Managing
    - Management of Hazardous Waste
    - Recording and Reporting
    - Storage Requirements
    - Conditionally Exempt Generators
    - Small Quantity Generators
    - Large Quantity Generators
    - Satellite Accumulation
    - Container Storage Area
    - Tank Storage
    - TCLP Ranges
    - EPA Hazardous Waste Codes
  - Section V Emergency Contingency Plan
    - Contingency Sample Plan

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- Section VI Choosing Transporters of Waste
    - Choosing a Waste Processor
    - Waste Disposal Options
    - Waste Reduction and Minimization
  - Section VII Radiation Principles
    - Principles for Environmental Managers
    - Laws and Regulations
  - Section VIII RCRA Training Requirements
    - Cradle to Grave System
    - Environmental Managers Responsibilities
    - Hazard and Risk Assessment
    - Personal Protective Equipment
    - Control, Confinement, and Containment of Releases
    - Decontamination
    - Regional Air Quality Contacts
  - Section IX Haz Materials Transportation Act and Haz Waste Transportation
    - MTB's 22 Hazard Classes
    - Pretransport Requirements
    - Transporter Requirements
    - Enforcement
    - Hazardous Waste Regulations

**Module 4           CECM 375**

- Section I EPA Underground Storage Tanks
  - Exemptions
  - Requirements for New UST's
  - Requirements for Existing UST's
  - Storing Hazardous Chemicals
  - Phase in Leak Detection Systems
  - Spill Clean Up Procedures
  - Tank Repair
  - Tank Closure
  - Financial Responsibility
  - Recordkeeping & Reporting
  - Notification for UST's
  - State UST Program Offices
  - EPA Regional UST Program Managers
- Section II CAA Amendments of 1990
- Section III Storm Water Discharge
  - Background of SWD
  - Definition of Storm Water
  - Discharge Classifications
  - Discharge Classification Permit

# Certification Program (cont.)

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- Clean Water Act
- What is Ahead in the CWA
- Section IV SARA Title III
  - Provisions of SARA Title III
  - Emergency Planning Notification
  - Chemical Release Notification
  - Community RTK Reporting
  - Toxic Chemical Release Reporting
  - Penalties
- Section V CERCLA
- Section VI FIFRA
- Section VII Radon
- Section VIII Phase One Environmental Audits
- Section IX Confined Space Entry

## Certified Ergonomic Compliance Director (CECD)

*(partial content listing)*

- Fitting The Task To The Man
- Chapter 1 - Muscular Work
  - physiological principles
- Chapter 2 - Nervous Control of Movements
  - physiological principles
  - reflexes and skills
- Chapter 3 - Improving Work Efficiency
  - optimal use of muscle strength
  - practical guidelines for work layout
- Chapter 4 - Problems Of Body Size
- Chapter 5 - The Design of Workstations
  - working heights
  - neck and head postures
  - seating at work
  - the design of VDT workstations
  - the design of keyboards
- Chapter 6 - Heavy Work
  - energy consumption at work
  - efficiency of heavy work
  - heart rate as a measure of work load
  - case histories involving heavy work

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- Chapter 7 - Handling Loads**  
back problems  
biomechanical models of the lower back  
intra-abdominal pressure  
*recommendations*
- Chapter 8 - Skilled Work**  
maximum control of skilled movements  
design of tools and equipment used for skilled work
- Chapter 9 - Man - Machine Systems**  
display equipment controls  
relationship between controls & display  
instruments
- Chapter 10 - Mental Activity**  
elements of "brain work"  
uptake of information  
memory  
sustained alertness (vigilance)
- Chapter 11 - Fatigue**  
muscular fatigue  
fatigue in industrial practice  
measuring fatigue
- Chapter 12 - Occupational Stress**  
what is stress  
the measurement of stress  
alleged stress among VDT operators
- Chapter 13 - Boredom**  
causes  
the physiology of boredom  
field studies and experiments
- Chapter 14 - Job Design in Monotonous Tasks**  
the fragmented work organization  
principles of job design
- Chapter 15 - Working Hours and Eating Habits**  
rest pauses  
nutrition at work
- Chapter 16 - Nightwork and Shiftwork**  
day and nighttime sleep  
nightwork and health  
organization of shiftwork  
recommendations

# Certification Program (cont.)

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- Chapter 17 - Vision**
  - the visual system
  - accommodation
  - the aperture of the pupil
  - the adaptation of the retina
  - eye movements
  - visual capacities
  - physiology of reading
  - visual strain
- Chapter 18 - Ergonomic Principles of Lighting**
  - light measurements and light sources
  - physiological requirements of artificial lighting
  - appropriate arrangement of lights
  - lighting for fine work
  - lighting in VDT offices
- Chapter 19 - Noise and Vibration**
  - perception of sound
  - noise load
  - damage to hearing through noise
  - physiological and psychological effect of noise
  - protection against noise
  - vibrations
- Chapter 20 - Indoor Climate**
  - thermoregulation in man
  - comfort
  - dryness of the air
  - field studies on indoor climate
  - recommendations for comfort indoors
  - heat in industry
  - air pollution and ventilation
- Chapter 21 - Daylight, Colors, and Music for a Pleasant Work Environment**
  - daylight
  - color in the workplace
  - music and work

*Plus ...*

**An Ergonomics Idea Book and Ergonomics Manual**



# Bachelor of Science Courses

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## Bachelor of Science Degree Programs

CSU offers three separate Bachelor of Science Programs:

1. Environmental Engineering
2. Occupational Safety & Health Engineering
3. Business Administration

## Entrance Requirements

A student accepted for enrollment in any Bachelor Degree Program must normally be in possession of a high school diploma or its equivalent.

## Degree Requirements

Entrance to the any Bachelor of Science Program requires the completion of at least 60 credits of lower-division courses. In order to be awarded a bachelor's degree, you must complete 120 credit hours. The maximum number of credits that may be awarded for transfer towards any Bachelor of Science Program may not exceed three-fourths (90 credits) of the total degree.

You may be able to transfer, challenge or apply life experience to a portion of your 60 credit upper-division course requirements. One-half (30) of these credits may be transferred coursework from other accredited institutions or awarded through challenge by CSU; up to 15 credits may be earned through life experience. A minimum of 30 upper division credits must be taken from Columbia Southern University.

## Completion Requirements

Completion of any Bachelor of Science Program requires:

- 60 upper division credits completed (upper division courses are numbered from 300 and above).
- 60 lower division credits (100-199) of general education.
- A minimum of 30 upper division credits completed through CSU.
- Fulfillment of all financial obligations.

# Lower Division Courses

## General Education-All Bachelor of Science Programs

<i>Course No.</i>	<i>Title</i>	<i>Credit</i>
<b>Humanities (12 Credits)</b>		
PHI 100	Introduction to Ethics	3
PHI 101	Introduction to Logic	3
AML 102	American Literature	3
HIT 103	History of Civilization	3
<b>Social Sciences (12 Credits)</b>		
SYG 100	Sociology	3
PSY 101	Psychology	3
CSB 102	Theories of Learning	3
GOV 103	United States Government	3
<b>Communication (9 Credits)</b>		
ENC 100	English Composition	3
ENC 101	Introduction to Communication	3
ENC 102	Technical Writing	3
<b>Natural Sciences/Math (15 Credits)</b>		
MAC 100	Business Consumer Math	3
MAC 101	Statistics	3
NSC 102	Environmental Geology	3
BSC 103	Biology	3
GLY 104	Earth Science	3
<b>Fine Arts (6 Credits)</b>		
ART 100	Essentials of the Theatre	3
ART 101	Design Basics	3
<b>Physical Education (6 Credits)</b>		
HUN 100	Nutrition	3
HLP 101	Physical Conditioning	3
	<b>Total</b>	<b>60</b>

# Upper Division Courses

## Bachelor of Science in Environmental Engineering

<i>Course No.</i>	<i>Title</i>	<i>Credits</i>
ENE 300	Introduction to Environmental Engineering	3
ENE 310	Ecology for Environmental Engineers	3
ENE 320	Industrial Hygiene	3
ENE 330	Air Pollution Fundamentals	3
ENE 340	Soils & The Greenhouse Effect	3
ENE 350	Solid Waste Management	3
ENE 360	Hazardous Waste Management	3
ENE 370	Toxicology	3
ENE 380	Environmental Law & Regulatory Compliance	3
ENE 390	Energy Conservation & Utilization in Industry	3
ENE 400	Ergonomics & Environmental Safety	3
ENE 410	Environmental Assessment	3
ENE 420	Industrial & Hazardous Waste Treatment	3
ENE 430	Hazardous Materials Emergency Response	3
JNE 440	Safety Engineering	3
ENE 450	SARA Title III	3
ENE 460	Environmental Contingency Planning	3
ENE 470	Groundwater Treatment Technology	3
ENE 480	Advanced Environmental Toxicology	3
ENE 490	Advanced Pollution Prevention	3
	<b>Total</b>	<b>60</b>

## Bachelor of Science in Occupational Safety & Health Engineering

SE 300	General Safety & Health	3
SE 310	Introduction to Occupational Safety & Health	3
SE 320	Air Quality Control	3
SE 330	Ergonomics & The Workplace	3
SE 340	Fire Prevention & Safety	3
SE 350	Hazard Communication Standard	3
SE 360	OSHA General Regulations	3
SE 370	Resource Conservation & Recovery Act	3

## Upper Division Courses (cont.)

SE 380	EPA Regulations	3
SE 390	Accident Investigation	3
SE 400	Safety & Accident Prevention I	3
SE 410	Safety Engineering	3
SE 420	Safety & Accident Prevention II	3
SE 430	Industrial Hygiene	3
SE 440	Legal Aspects of Safety & Health	3
SE 450	OSHA Compliance CFR 29	3
SE 460	Safety Program Design & Management	3
SE 470	Environmental Assessment	3
SE 480	Hazardous Materials Emergency Response	3
SE 490	Toxicology	3
	<b>Total</b>	<b>60</b>

## Bachelor of Science in Business Administration

BBA 300	Introduction to Business	3
BBA 310	Principles of Management	3
BBA 320	Managerial Finance	3
BBA 330	Marketing Principles	3
BBA 340	Business Law	3
BBA 350	Human Resource Management	3
BBA 360	International Business	3
BBA 370	Computers & Business	3
BBA 380	Economic Principles	3
BBA 390	Legal Aspects of Safety & Health	3
BBA 400	Business Guide to Avoiding Env. Liability	3
BBA 410	Environmental Laws & Real Estate	3
BBA 420	Sales Principles	3
BBA 430	Environmental Remediation Contracting	3
BBA 440	Wage & Salary Administration	3
BBA 450	Environmental Insurance	3
BBA 460	Environmental Decision Making for Engineers and Business Managers	3
BBA 470	Energy Conservation & Utilization	3
BBA 480	Labor & Industrial Management	3
BBA 490	Advertising & Promotion	3
BBA 495	The "TQM" Trilogy (ISO 9000)	3
	<b>Total</b>	<b>63</b>

# Master of Science Courses

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## Master of Science Degree Programs

CSU offers three separate Master of Science Degree Programs:

1. Environmental Engineering
2. Occupational Safety & Health Engineering
3. Business Administration

## Entrance Requirements

A student accepted for enrollment in any Master Degree Program must have been awarded a *Baccalaureate Degree* from an institution accredited by an institutional accrediting agency recognized by the U. S. Secretary of Education or an institutional accrediting agency recognized by the Commission on Recognition of Postsecondary Accreditation (CORPA).

## Degree Requirements

All Master of Science Programs offered by CSU total 36 Credits. A maximum of one-half (18) of the credits required may be given through transfer credit or a combination of transfer credit and life experience credit. However, for any student, the credit given for life experience shall not exceed one-fourth (9) of the credits required for the Master Degree. A minimum of 18 Credits must be taken from Columbia Southern University.

## Completion Requirements

Completion of any Master of Science Program requires:

- 36 total credits completed.
- A maximum of 18 credits may be transferable.
- A minimum of 18 credits completed through CSU.
- Fulfillment of all financial obligations.

# Master of Science Courses (cont.)

## Master of Science in Environmental Engineering

<i>Course No.</i>	<i>Title</i>	<i>Credit</i>
ENE 500	Occupational & Environmental Safety Engineering and Management	3
ENE 510	Superfund Training	3
ENE 520	Advanced Water Quality Control	3
ENE 530	Advanced Hazardous Waste Management	3
ENE 540	Petroleum Engineering & The Environment	3
ENE 550	Environmental Economics	3
ENE 560	Recycling	3
ENE 570	Environmental Laws & The Land	3
ENE 580	Waste Contracting	3
ENE 590	Thesis	9

## Master of Science in Occupational Safety & Health Engineering

SE 500	Advanced Regulatory Compliance	3
SE 510	Cumulative Trauma Disorders	3
SE 520	Safety Administration I	3
SE 530	Industrial Air Quality	3
SE 540	Fire Engineering Technology	3
SE 550	Superfund Training	3
SE 560	Safety Administration II	3
SE 570	Lead	3
SE 580	Occupational & Environmental Safety	3
SE 590	Thesis	9
	<b>Total</b>	<b>36</b>

## Master of Science in Business Administration

MBA 500	Marketing Management	3
MBA 510	Management Accounting	3
MBA 520	Advanced Business Policy	3
MBA 530	Hazardous Waste Management	3
MBA 540	Consumer Behavior	3
MBA 550	Organizational Design & Development	3
MBA 560	Strategic Business Policy	3
MBA 570	Advanced Business Accounting	3
MBA 580	Marketing Research	3
MBA 590	Environmental Strategies	3
MBA 600	Thesis	9
	<b>Total</b>	<b>36</b>

# Lower Division Descriptions

## All Bachelor of Science Programs

*Credits shown in parentheses*

### *Humanities (12 hrs.)*

PHI 100 (3) **Introduction to Ethics**  
An inquiry into the moral implications of personal, social, and political commitment. Representative traditional and contemporary ethical concepts will be discussed in light of uses affecting the quality of existence on the planet.

✓  
C Dr - Lori  
PHI 101 (3) **Introduction to Logic**  
Study of and practice in reasoning and critical thinking in deductive and inductive logic. Techniques the student learns are directly related to other courses and will help the student in solving everyday problems.

AML 102 (3) **American Literature**  
Selected American literature from its beginnings to the mid-nineteenth century.

✓  
HIT 103 (3) **History of Civilization**  
This course traces the social, intellectual, political, and cultural forces that flow into the mainstream of Western development and culminate in the rise of Modern Europe.

### *Social Sciences (12 hrs.)*

✓  
SYG 100 (3) **Sociology**  
A course introducing the student to the science of social relationships and the processes of social change. Among specific topics included are: the structure of society, groups and organizations social power and control, and values.

PSY 101 (3) **Psychology**  
An introductory course explaining the basic terms and concepts of psychology. This course will provide a basic understanding of human behavior and personality development with an emphasis on practical applications.

✓  
CB 102 (3) **Theories of Learning**  
Learning is the most important and interesting area in psychology, and the classic learning

# Lower Division Descriptions (cont.)

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theories remain of great value. They provide the best guides for practical application and the best answers to questions about the nature of mind. They are the culmination of a historical progression in thought and they are the best key to having and understanding of how we work.

✓ GOV 103 (3) **United States Government**

A survey of the fields of political science with special emphasis on the politics of change. The major political problems effecting man's future are developed historically, theoretically, and comparatively.

## *Communication (9 hrs.)*

ENC 100 (3) **English Composition**

A comprehensive course embodying the fundamentals of effective expression with emphasis on expository writing and logical thinking.

✓ ENC 101 (3) **Introduction to Communication**

In this Course the student will learn the basics of short essays, modes and strategies, drafting and revising and various other steps needed in order to become an effective writer.

ENC 102 (3) **Technical Writing**

The principles of expository writing (unity, clarity, coherence, organization, and corrections) are applied to a variety of industrial and technical reports, letters, and forms.

## *Natural Sciences/Math/Statistics (15 hrs.)*

✓ MAC 100 (3) **Business Math**

Mathematics problems involved in business-payrolls, depreciation, simple and compound interest, cash and trade counts, promissory notes and drafts, taxes, insurance, and others.

MAC 101 (3) **Statistics**

This course introduces descriptive and inferential statistics through such topics as frequency distributions, measures of position, central tendency and dispersion, simple probability, and hypothesis testing.



✓ NSC 102 (3) **Environmental Geology**  
At successful completion of this course the student will have an understanding of Physical Geology, the sea floor, plate tectonics, the mountain belt and the continental crust along with many other geologic features.

✓ BSC 103 (3) **Biology**  
This course is designed to impart biological information which will aid the student in understanding more clearly the relationship of *biology to his own life, to present society as it consists of other organisms, and his future.*

✓ GLY 104 (3) **Earth Science**  
A systematic study of the physical elements of the earth. Course emphasis centers on the elements of landforms, weather, climatic types, natural vegetation, soils and mineral resources, volcanism, and diastrophism.

***Fine Arts (6 hrs.)***

ART 100 (3) **Essentials of Theatre**  
A study of the social, artistic, and commercial aspects of the theatre in the world today.

ART 101 (3) **Design Basics**  
Basic experience in the creative processes of visual communication, concept development, layout skills, and uses of props.

***Physical Education (6 hrs.)***

✓ HUN 100 (3) **Nutrition**  
This course provides the student with nutritional, physical fitness, and personal growth concepts to promote the wellness of the individual. The course provides information on nutritional requirements, dietary planning, cardiovascular fitness, aerobic activity, self concept enhancement, assertiveness, and stress management.

HLP 101 (3) **Physical Conditioning**  
This course involves instruction in physical conditioning methods and their effect. Variable content includes aerobic exercise, calisthenics, bench stepping, circuit training, interval training, and weight training.

# Upper Division Descriptions

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## Bachelor of Science in Environmental Engineering

- ENE 300 (3) **Introduction to Environmental Engineering**  
This course will discuss the importance of air, water, and noise pollution, as well as solid, hazardous, and radioactive waste management. The concept of pollution control beginning with the minimization of the generation of waste will be discussed. Other topics discussed are: the concept of mass balance as a tool for problem solving, chemical reaction kinetics, reactor design, sludge mass balance, and waste auditing.
- ENE 310 (3) **Ecology for Environmental Engineers**  
This course will discuss the role of environmental engineering in maintaining the stability of freshwater, marine, and terrestrial ecosystems.
- ENE 320 (3) **Industrial Hygiene**  
This course will discuss the important principles of industrial hygiene, its use in the workplace, and its ability, when implemented, to reduce workplace related environmental illness.
- ENE 330 (3) **Air Pollution Fundamentals**  
This course will discuss atmospheric effects and atmospheric pollutants, the effects of pollutants on the health of the human body, livestock, and vegetation, indoor air pollution, noise pollution, odor pollution, and air quality surveillance.
- ENE 340 (3) **Soils & The Greenhouse Effect**  
The effect of soils and vegetation on the fluxes of greenhouse gases, the surface energy balance, and the water balance will be discussed. Also discussed will be the alternative disposal methods of solid wastes, the design principles involved, and their environmental impact.

**ENE 350 (3) Solid Waste Management**

This course discusses the importance of production, storage, collection, and transport of solid wastes and alternative methods of solid wastes, the design principles involved, and their environmental impact and management of radiological solid wastes.

**ENE 360 (3) Hazardous Waste Management**

Risk assessment, environmental legislation, waste minimization and resource recovery will be discussed along with the importance of hazardous wastes, groundwater considerations, thermal processes, landfill design and disposal.

**ENE 370 (3) Toxicology**

Formulating measures to protect the health of workers against toxicants in factories, farms, mines and other occupational environments

will be

discussed. Also, the importance of general principles of toxicity, testing procedures, target organs, and toxic substances will be emphasized.

**ENE 380 (3) Environmental Law & Regulatory Compliance**

Federal and State environmental laws and environmental impact assessment techniques will be a major topic. Other important topics discussed are Clean Air Act, RCRA, Toxic Substances Control Act, the Federal Water Pollution Control Act, the Safe Drinking Water Act, and other acts significant to environmental engineering.

**ENE 390 (3) Energy Conservation & Utilization in Industry**

Major topics of discussion include: reduction of environmental wastes by up to 50%, air toxins and technology issues, RCRA reauthorization, permitting and enforcement, and mobile sources and alternative fuels.

# Upper Division Descriptions (cont.)

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- ENE 400 (3) **Ergonomics & Environmental Safety**  
The fundamentals of ergonomics, ergonomics of group organizations, and ergonomics applications in industry will be discussed. Also the hazards in the workplace connected with electric shock, the effects of noise and vibration on the body and consciousness, and the comfort and discomfort zones of temperature and humidity will be discussed.
- ENE 410 (3) **Environmental Assessment**  
The signing of the National Environment Policy Act (NEPA) on January 1, 1970, ushered in a decade of sweeping change in the way the U.S. government did business. Upon completion of this course, the student will have an understanding of the many facets of the NEPA.
- ENE 420 (3) **Industrial & Hazardous Waste Treatment**  
Topics covered include: the processes and operations that attempt to reduce or eliminate the generation of waste and/or pollutants that are emitted into the environment, waste minimization, source reduction, pollution minimization, improvement of understanding of pollution treatment and waste management.
- ENE 430 (3) **Hazardous Materials Emergency Response**  
Topics covered include: development of training for hazardous materials emergency responders, first responder operations level, and hazardous materials technician; personal protective equipment, direct read equipment, computers, reference libraries and others.
- ENE 440 (3) **Safety Engineering**  
Upon completion of this course the student will have developed a scientific approach to solving safety and environmental problems. The student will be aware of his legal liability and his responsibility for the public welfare.

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- ENE 450 (3) **SARA Title III**  
Release reporting requirements under SARA Title III will be discussed along with the reporting requirements of reported releases or threatened releases of hazardous materials, and storage and filing requirements of extremely hazardous materials. The Hazard Communication, "Right to Know" will also be covered.
- ENE 460 (3) **Environmental Contingency Planning**  
Techniques for writing and implementing emergency contingency plans for use in all areas of industrial emergencies will be covered. Requirements by OSHA and EPA for contingency plans will also be discussed.
- ENE 470 (3) **Groundwater Treatment Technology**  
General principles of contaminated groundwater and specific knowledge in the application of existing groundwater cleanup technology will be presented.
- ENE 480 (3) **Advanced Environmental Toxicology**  
The effects of various chemicals and their human toxicity and the neuro-development effect of childhood exposure will be covered. Also presented will be the association between a group of health effects and a group of potential pollutants.
- ENE 490 (3) **Advanced Pollution Prevention**  
New pollution technology, new regulations, and newly discovered environmental issues will be explained. Pollution issues of a global nature concerning the environment and the economic impact of EPA and related regulations will be discussed.

# Upper Division Descriptions (cont.)

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## Bachelor of Science in Occupational Safety & Health Engineering

*Credits listed in parentheses*

- SE 300 (3) **General Safety & Health**  
The aspect of systems safety engineering and management of those systems as they apply to the work force will be discussed. Implementation of public employee safety and health management, and the changing facets of OSHA as it contends with various state approved plans will be covered.
- SE 310 (3) **Introduction to Occupational Safety & Health**  
An understanding of the history of occupational safety and health and how it relates to modern day occupational and environmental laws will be presented.
- SE 320 (3) **Air Quality Control**  
The topics presented include: various engineering practices used in indoor air quality, along with air quality standards in approved states; issues covering how to lower the VOC levels in the workplace and implementation of such methods by means of quality control and employee training programs.
- SE 330 (3) **Ergonomics & The Workplace**  
The use of ergonomics in computerized offices and the implementation of ergonomic programs will be emphasized. In house ergonomics programs will be discussed along with how to fit the employee to the task they are performing, using sound ergonomics practices.
- SE 340 (3) **Fire Prevention & Safety**  
Implementing emergency fire protection programs, organizing a fire fighting team, and training employees in the safe handling of flammable chemicals will be presented.
- SE 350 (3) **Hazard Communication Standard**  
OSHA "Right to Know" in an overview covering topics such as: Identifying Hazardous Materials, MSDS's, Labeling, Chemical

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- Awareness, Training requirements, Written Hazard Communication Standard, and many others.
- SE 360 (3) **OSHA General Regulations**  
Topics covered are: Lockout/Tagout, Respiratory Protection, Fire Prevention Planning, Bloodborne Pathogens, and Ergonomics, all from a regulatory viewpoint.
- SE 370 (3) **Resource Conservation & Recovery Act**  
The Definition of hazardous waste, managing your hazardous waste, storage requirements, choosing a waste transporter, and the emergency contingency plan are some of the major topics covered.
- SE 380 (3) **EPA Regulations**  
A regulatory view of Underground Storage Tanks, Clean Air Act of 1990, Storm Water Discharge, SARA Title III, CERCLA, FIFRA, RADON, Phase One Environmental Audits, Confined Space Entry.
- SE 390 (3) **Accident Investigation**  
Systematic procedural coverage for investigating audits, determining cases and taking corrective steps to lower accidents will be covered. Accident investigation will be shown as a profitable and practical management tool.
- SE 400 (3) **Safety & Accident Prevention I**  
Upon completion of the course the student will be able to understand the programs required for safety management and implementation of those various accident prevention programs.
- SE 410 (3) **Safety Engineering**  
Upon completion of this course the student will have developed a scientific approach to solving safety and environmental problems. The student will be aware of their legal liability and their responsibility for the public welfare.

# Upper Division Descriptions (cont.)

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- SE 420 (3) **Safety & Accident Prevention II**  
An understanding of the cause and effect of workplace accidents and the engineering methods used to prevent those accidents will be presented.
- SE 430 (3) **Industrial Hygiene**  
This course will discuss the important principles of industrial hygiene, its use in the workplace, and its ability, when implemented, to reduce workplace related environmental illness.
- SE 440 (3) **Legal Aspects of Safety & Health**  
This course will cover the far reaching effects of the legal aspects of environmental and OSHA noncompliance and its relationship to injury, disease, and death.
- SE 450 (3) **OSHA Compliance CFR 29**  
A working knowledge of OSHA's regulations using Code of Federal Regulations (CFR) 29 Volumes I and II will be presented.
- SE 460 (3) **Safety Program Design & Management**  
The design and implementation of safety programs and successful management of those programs will be emphasized.
- SE 470 (3) **Environmental Assessment**  
The signing of the National Environment Policy Act (NEPA) on January 1, 1970, ushered in a decade of sweeping change in the way the U.S. government did business. Upon completion of this course, the student will have an understanding of the many facets of the NEPA.
- SE 480 (3) **Hazardous Materials Emergency Response**  
Topics covered include: development of training for hazardous materials emergency responders, first responder operations level, and hazardous materials technician; personal protective equipment, direct read equipment, computers, reference libraries and others.



- SE 490 (3) **Toxicology**  
Formulating measures to protect the health of workers against toxicants in factories, farms, mines, other occupational environments will be discussed. Also, the importance of general principles of toxicity, testing procedures, target organs, and toxic substances will be emphasized.

## **Bachelor of Science in Business Administration**

*Credits listed in parentheses*

- BBA 310 (3) **Introduction to Business**  
Introduces the student to macro view of business that is essential to such advanced and specialized courses as finance, marketing, management and human relations.
- BBA 320 (3) **Principles of Management**  
This course gives a broad spectrum of the business "today". Stressing in addition to the norms: globalization affects on today's business, total quality management, commitment to productivity, ethical behavior, social commitment to humanity.
- BBA 330 (3) **Managerial Finance**  
Managerial Finance is an essential component of your daily job activities, regardless of major. An understanding of the theories, concepts, techniques and practices presented throughout the course will fully acquaint you with the financial manager's activities and decisions.
- BBA 340 (3) **Marketing Principles**  
Marketing does not involve the act of selling what you make in as much as knowing what to make! Organizations gain market leadership by understanding consumer needs and finding solutions that delight customers through superior value, quality, and service. If customer value and satisfaction are absent, no

# Upper Division Descriptions (cont.)

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amount of advertising or selling can compensate for that loss.

**BBA 350 (3) Business Law**

The approach of the course is to familiarize the student with how basic legal principles affect the everyday procedures in business. Also, this course will instruct the student in the use of legal principles in everyday life by providing them with practical knowledge of the basis for our legal system, the functions of the courts, the conduct of a lawsuit, and the laws of negligence.

**BBA 360 (3) Human Resource Management**

Provides the student with a complete, comprehensive review of essential personnel management concepts and techniques. Topics of study include: job analysis, testing, compensation and appraisal, all coming together to foster employee commitment.

**BBA 370 (3) International Business**

Introduces the student to an overview of the means of conducting international business, with an emphasis on what makes international different from domestic; the effects of the social systems within countries on the conduct of international business; the major theories explaining international business transactions and the institutions influencing these activities; the financial exchange systems and institutions that measure and facilitate international transactions; the dynamic interface between countries and companies attempting to conduct foreign business activities; alternatives for overall corporate policy and strategy for global operations; the management of concern about international activities that fall within functional disciplines.

**BBA 380 (3) Computers & Business**

In the world of computers and information technology, it sometimes seems like change is

the only constant. This course is designed to provide background and breadth. It deals with the what and why of computers: students can learn how on a computer.

**BBA 380 (3) Economic Principles**

Students approach their first economics course with a great deal of acquired folk wisdom, much of which is inaccurate, simplistic or just plain wrong. Each chapter of this course states a myth and then proceeds to demolish these ideas that haunt economics. Topics covered are cost curves, elasticity, economic behavior, and Phillips curve.

**BBA 390 (3) Legal Aspects of Safety & Health**

This course will cover the far reaching effects of the legal aspects of environmental and OSHA noncompliance and its relationship to injury, disease, and death.

**BBA 400 (3) Business Guide to Avoiding Environmental Liability**

As environmental enforcement activities accelerate it is critical for organizations to have in place environmental policies and programs which will lead to the detection and prevention of violations. This course is designed to inform businesses of the key issues in the enforcement of environmental laws and to help a business develop environmental compliance programs and procedure to respond to investigations.

**BBA 410 (3) Environmental Laws & Real Estate**

The purpose of this course is to provide updated information concerning federal and state environmental laws that affect business transactions. The student will have an understanding of superfund laws, wetland regulations, environmental liabilities, transfer laws, bankruptcy and environmental law along with environmental liability on corporate parents, successors and individuals.

**BBA 420 (3) Sales Principles**

Discover the top secrets of successful selling.

# Upper Division Descriptions (cont.)

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The material describes what it takes to make it in sales. You will learn how to be professional, think like an achiever, communicate, qualify hot prospects, make power presentation, negotiate to win, and close the sale.

**BBA 430 (3) Environmental Remediation Contracting**  
Environmental Remediation Contracting is a big business in the United States. Upon successful completion of this course the student will have an understanding of remediation and the many variables involved in this field.

**BBA 440 (3) Wage & Salary Administration**  
This course focuses on designing and administering a compensation system that rewards employees fairly while stimulating them to provide goods and services that satisfy customer demands and permitting the organization to operate profitably. Other points of review are what organizations are doing today to expand their base pay opportunities with incentive awards resulting from various productivity or performance measures and the complex and ever expanding area of benefits.

**BBA 450 (3) Environmental Insurance**  
During the past twenty years, the public and private sectors in the U.S. have spent a considerable amount of money to control pollution and to clean up the environment. In 1990, the price tag was \$100 billion, or 2% of the entire gross national product. Businesses paid for more than 60% of this price. By the year 2000, this cost is expected to \$200 billion. Every business manager needs to know how to protect their business from these escalating costs.

**BBA 460 (3) Env. Decision Making for Engineers and Business Managers**  
Because environmental management is a

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relatively new addition to business disciplines, most environmental managers do not have the benefit of either guidance in the form of a mentor, or institutional guidance in the form of established corporate policy and practice. This course focuses on managing the day-to-day decisions that must be made by management.

**BBA 470 (3) Energy Conservation & Utilization in Industry**  
Major topics of discussion include: reduction of environmental wastes by up to 50%, air toxins and technology issues, RCRA reauthorization, permitting and enforcement, and mobile sources and alternative fuels.

**BBA 480 (3) Labor & Industrial Management**  
This course outlines the labor-management development from medieval times to the current status. pros and cons of the various act legislated, their impact, and the rise of the strength of unions to its slow demise today.

**BBA 490 (3) Advertising & Promotion**  
This course will introduce students to the fast changing field of advertising and promotion. The IMC "Integrated Marketing Communications" or the "big picture" makes an approach to planning marketing and promotional programs and coordinating the various communication functions. To be effective in today's business world, the manager must recognize how a firm can use all the promotional tools to communicate with its customer.

**BBA 495 (3) The "TQM" Trilogy (ISO 9000)**  
Utilizing a broad managerial perspective, this course will show you how to creatively draw on the trilogy to develop your own customized blueprint for excellence. Measuring your company's quality efforts against the highest standards and then working hard to meet those standards will reap great benefits.

# Master Level Descriptions (cont.)

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## Master of Science in Environmental Engineering

*Credits shown in parentheses*

- ENE 500 (3) **Occupational & Environmental Safety Engineering & Management**  
Upon successful completion of this course, the student will be able to discuss such topics as OSHA Regulations, Industrial Toxicology, Personal Protective Equipment, Management of Fire Hazards, Noise Control, Electrical Safety, Container and Spill Management, First Aid, and many others..
- ENE 510 (3) **Superfund Training**  
The Comprehensive Environmental Response Compensation & Liability Act of 1980, commonly known as "Superfund" or "CERCLA" was passed by congress and signed into law on December 11, 1980. Extensive amendments, known as the Superfund Amendments & Reathurization Act or "SARA", were adopted on October 17, 1986. This Course will give the student the understanding and working knowledge of the above laws and its far reaching liability.
- ENE 520 (3) **Advanced Water Quality Control**  
The conditions for water quality criteria and fundamental considerations of acceptable water quality will be covered. Processes used in the treatment of waste for disposal and reuse, waste disposal technologies will also be covered.
- ENE 530 (3) **Advanced Hazardous Waste Management**  
Identification of hazardous waste and present methods of transporting, storing, monitoring, treating, and properly disposing of the waste will be covered.
- ENE 540 (3) **Petroleum Engineering & The Environment**  
Gas processing, drilling and wells, gas production, and underground storage will be discussed. Also, the geology, rock properties, fluid flow in pipes and porous materials, and phase behavior is presented.

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- ENE 550 (3) **Environmental Economics**  
This course will present a detailed presentation of what should be expected from direct, and out-of-pocket expenses for implementing pollution control measures and compliance mandates to conform with environmental laws.
- ENE 560 (3) **Recycling**  
Upon completion of this course, the student will have a firm understanding that recycling is a solid waste management strategy. Recycling is a method of solid waste management equally useful as landfilling or incineration and it is environmentally more desirable.
- ENE 570 (3) **Environmental Laws & The Land**  
The purpose of this course is to provide updated information concerning federal and state environmental laws that affect business transactions. The student will have an understanding of superfund laws, wetland regulations, environmental liabilities, transfer laws, bankruptcy and environmental law along with environmental liability on corporate parents, successors and individuals.
- ENE 580 (3) **Waste Contracting**  
Environmental remediation contracting is a big business in the United States. Upon successful completion of this course the student will have an understanding of remediation and the many variables involved in this field.
- ENE 590 (9) **Thesis**  
The student will be expected to write a thesis based upon a topic within the environmental field. This topic must be pre-approved by the University. The student will use the form and style specified by the University. A rough draft will be reviewed by the faculty prior to submitting the final work to the University.

# Master Level Descriptions (cont.)

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## Master of Science in Occupational Safety & Health Engineering

*Credits listed in parentheses*

- SE 500 (3) **Advanced Regulatory Compliance**  
An understanding of all aspects of regulatory compliance and how to avoid OSHA citations is presented in this course by use of the official OSHA Field Manual.
- SE 510 (3) **Cumulative Trauma Disorders**  
By use of Cumulative Trauma Disorders by NSC, Noise Control by NSC, and Hearing Conservation in the Workplace, the student will understand the cause and effect of cumulative trauma disorders and how to prevent them.
- SE 520 (3) **Safety Administration I**  
Upon completion of this course, the student will have an advanced knowledge of effective supervision on safety in the workplace.
- SE 530 (3) **Industrial Air Quality**  
The student will understand the cause and effect of industrial air ventilation and how to use successful engineering methods in order to comply with federal and state air regulations.
- SE 540 (3) **Fire Engineering Technology**  
By study and use of current NFPA methods, the student will have an understanding of fire protection engineering, its cause, and how to prevent industrial fires in the workplace.
- SE 550 (3) **Superfund Training**  
The Comprehensive Environmental Response Compensation & Liability Act of 1980, commonly known as "Superfund" or "CERCLA" was passed by congress and signed into law on December 11, 1980. Extensive amendments, known as the Superfund Amendments & Reauthorization Act or "SARA", were adopted on October 17, 1986. This Course will give the student the understanding and working knowledge of the above laws and its far reaching liability.



- SE 560 (3) **Safety Administration II**  
The student will understand the human approach to safety management and the vital technologies used to accomplish effective safety management.
- SE 570 (3) **Lead**  
At successful completion of this course the student will have an understanding of current technologies being used in lead abatement and recycling, as well as how to define the health and safety aspects associated with lead.
- SE 580 (3) **Occupational & Environmental Safety**  
Upon successful completion of this course, the student will be able to discuss such topics as OSHA Regulations, Industrial Toxicology, Personal Protective Equipment, Management of Fire Hazards, Noise Control, Electrical Safety, Container and Spill Management, First Aid, and many others.
- SE 590 (9) **Thesis**  
The student will be expected to write a thesis based upon a topic within the occupational safety and health field. This topic must be pre-approved by the University. The student will use the form and style specified by the University. A rough draft will be reviewed by the faculty prior to submitting the final work to the University.

## **Master of Science in Business Administration**

*Credits listed in parentheses*

- MBA 500 (3) **Marketing Management**  
Business marketing is also in a period of transformation, reflecting the changing face of American business in general: less growth in heavy industry and more in service, the evolution of information as a product, and the increasing prominence of international opportunities. Business Management

# Master Level Descriptions (cont.)

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Marketing is aimed at those students with a foundation in basic marketing principles with special emphasis on the special elements and requirements of business markets. A strong emphasis placed on the unique elements of the buyer-seller dyad and the unique needs and processes of the business buyer. After all, it is the buyer that distinguishes consumer marketing from business marketing. Other topics include Personal Selling and Sales Management Business Services, International Business Marketing, and Ethics

**MBA 510 (3) Management Accounting**

This course focuses the student's attention on the primary purpose of management accounting data, decisions by management as contrasted with external reporting. Theory and technique make the coverage of the material complete. Accounting theory, economic theory, quantitative methods and organizational theory are the subjects covered.

**MBA 520 (3) Advanced Business Policy**

This course focuses on the roles, tasks and skills of the general manager in leading the overall enterprise or business unit in contrast to the tasks of a manager whose responsibilities are limited to a functional specialty. Strategic management as a key function and responsibility of the line general manager not as a staff planning activity. Building strategy and building an organization are interdependent tasks. Importance of general management practice as a professional activity.

**MBA 530 (3) Hazardous Materials Management**

Identification of hazardous waste and present methods of transporting, storing, monitoring, treating, and properly disposing of the waste will be covered.

**MBA 540 (3) Consumer Behavior**

This course introduces the student to consumer buying and marketers selling. It is about many

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forms of influence; our culture, social forces from our family, friends, peers, to the persuasive attempts by advertising and salespersons. Consumer behavior poses interesting questions: why are some people attracted to some products, but not to others? Why do some consumers spend frugally while others run up huge debts? A fascinating and exciting course.

**MBA 550 (3) Organizational Theory: Research & Design**

The principal thesis of this book is twofold (1) theories of organizations require systematic research and (2) organizational design decisions should be informed by the fruits of systematic research rather than by custom, ideology or conventional wisdom. Theories of organization are reviewed: Weber's theory of bureaucracy, open systems theory, resource dependence, institutional theory, transaction-cost economics and organizational ecology.

**MBA 560 (3) Strategic Business Policy**

This course achieves its objectives by presenting and explaining concepts and theories that are useful in understanding the strategic management process. It offers critical analysis's in the field of strategy to acquaint the student with the literature of this area and to help develop the student's research capabilities. A description of the people who manage strategically and suggests a model of strategic management.

**MBA 570 (3) Advanced Business (Management) Accounting**

Management Accounting seems to be at a crossroads. The business environment is more dynamic today than it was just a few years ago. The movement toward strategic management has accelerated, but at the heart of the matter is still the same — information for decision making and the role of the management accountant in the accumulation, analysis and use of that information. Thus, the themes of

# Master Level Descriptions (cont.)

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this course are managers must have relevant information within a framework of strategic management and managers must consider a dynamic environment.

**MBA 580 (3) Marketing Research**

This course is for those who will use marketing research information to make managerial decisions. Areas of study are problem definition, a significant managerial task during the research process. Students are prepared to be "doers" of research. To assemble raw information and integrate it into business decisions on a daily basis.

**MBA 590 (3) Environmental Strategies**

This course explores these concepts and strategies within the framework of resource management, stewardship and sustainable development. It seeks to promote a pattern of economic and social development that meets our needs today without compromising the capacity of future generations to fulfill their own aspirations. A preoccupation with the environment is not what this course is about — rather, it is about expanding the stakeholders and the time horizon (by at least two generations) and incorporating environmental, health, and safety priorities in management thinking along with other strategic issues.

**MBA 600 (9) Thesis**

The student will be expected to write a thesis based upon a topic relating to the business field. This topic must be pre-approved by the University. The student will use the form and style specified by the University. A rough draft will be reviewed by the faculty prior to submitting the final work to the University.

# Curriculum Objectives

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## Environmental Engineering

The Environmental Engineering program is designed to provide "State of the Art" high quality education to students in order to prepare them for current or ultimate responsibilities by providing technically sound programs of instruction. Today's society demands extensive technological requirements in the engineering arena coupled with a broad based educational foundation to guarantee success. Graduates are prepared to assume positions with government, to enhance existing careers or to pursue graduate studies.

## Business Administration

The Business Administration programs are designed to prepare students to function effectively in a complex business environment. In today's business world managers must have a strong business management, communication, marketing, human resource, tools of measurement, accounting, standards management, and computer technology background. The programs are designed to give essential extensive instruction in all the basic fields. The programs also include focus on international marketing, trade, and legal issues. Graduates are prepared to assume responsibilities or enhance careers in finance, management, marketing, accounting, economics and organizational fields.

## Occupational Safety & Health Engineering

The Occupational Safety and Health degree programs are designed to provide extensive educational background for modern day occupational safety and health applications in industry, government, consultation, legal, and insurance careers. The undergraduate and graduate courses focus on general safety, OSHA regulatory compliance, industrial hygiene, fire prevention and safety, accident prevention, ergonomics and safety program design and management. The graduate will be prepared to assume responsibilities or enhance careers in occupational safety and health management positions in government, industry, consultation, legal, and insurance fields or to pursue further graduate studies.

# Curriculum Objectives

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# Columbia Southern University

*by virtue of the authority vested in them have conferred on*

**John Doe**

*who has satisfactorily pursued the studies and passed the examinations  
required for the professional credentials of*

**CECM**

***Certified Environmental Compliance Manager***

*and is therefore qualified for Professional Registration with the*

**International Registry of Environmental Engineers  
and Compliance Professionals**

Scaled and Signed January 1, 1995

Valid thru December 31, 1995

*M. Ray Curtis*

President

*Bob Meyer*

Chairman



# Columbia Southern University

The 31 known that

Michael R. Smith

having successfully completed the course of study as prescribed by Columbia Southern University and having complied with all the requirements of the University and the State of Alabama is hereby awarded the degree of

## Master of Science in Environmental Engineering

And is entitled to all the rights and privileges appertaining to that degree.

In testimony whereof, the Board of Trustees has granted this diploma, bearing the Seal of the University and the signatures of its duly authorized officers herunto affixed.

Awarded August 19th, Nineteen Hundred and Ninety Four

M. Roy Cook  
President

Dean of University  
[Signature]



Sample  
A-1-1-1  
Department of Trustees





