

Career-Related Services

Career Counseling
Graduate School Planning
Career Resource Library
Career Assessments
Internship Planning
Credentials Services

Hours

Monday - Friday
8 am - 5 pm

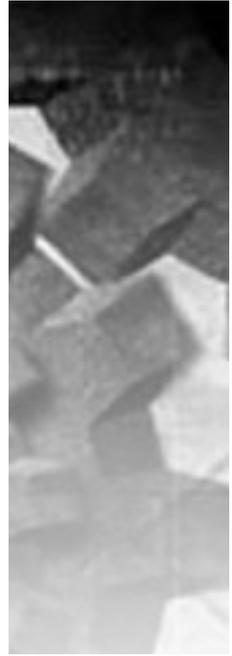


School of UNDERGRADUATE STUDIES

512-232-8400 Jester A115

utexas.edu/ugs/csacc

Engineering Route to Business



Center for STRATEGIC ADVISING
& CAREER COUNSELING

Career Options for Engineering Route to Business Majors

This booklet contains specific information about majoring in Engineering Route to Business at The University of Texas at Austin, as well as career opportunities related to this major. The careers listed typically require a bachelor's degree, and special certification or training requirements are noted. Please use this booklet as an idea generator, rather than as a comprehensive list of all career options for Engineering Route to Business majors. The career descriptions were obtained from the Center for Strategic Advising & Career Counseling (CSA&CC) library resources and career websites (see listing of sources on last page).

The first section, "Direct Career Opportunities," includes careers that use the problem-solving and communication skills acquired by Engineering Route to Business majors. The second section, "More Career Opportunities," lists careers that are potentially available to all business majors who have related experience or coursework.

For Engineering Route to Business majors, there are many career options that require a master's or doctoral degree but do not require any particular undergraduate degree. Examples of these include law, international affairs, museum administration, library and information studies, hospital administration, and many more. For careers requiring graduate education, please visit our library or speak to a career counselor.

The CSA&CC offers many other services and resources to help you with your career planning. These include:

- Career Counseling
- Career Assessment
- Career Information Library
- Internship Information
- Graduate School Planning Assistance

Visit our website at utexas.edu/ugs/csacc or call (512) 232-8400 for more information.

MAJORING IN ENGINEERING ROUTE TO BUSINESS AT THE UNIVERSITY OF TEXAS AT AUSTIN

Departmental Website: www.mcombs.utexas.edu/udean/major

Campus Location: CBA 2.400

Phone Number: 471-0690

DESCRIPTION OF MAJOR

Engineering Route to Business involves the integration of science, math, engineering, and business to develop a broad strategic perspective of business principles and acquire a solid command of the technical fundamentals of engineering.

AREAS OF STUDY

Students choose a business block (Finance/Accounting, Supply Chain Management, MIS, or Marketing) and an engineering block (Electrical, Computer, Civil, Chemical, Mechanical, or Operations).

EXAMPLES OF COURSES

MAN 374 General Management and Strategy

Designed to enable students to analyze business situations from the point of view of the practicing general manager. Addresses key tasks involved in general management, including strategic decisions that insure the long-term health of the entire firm or a major division.

MKT 363 Professional Selling and Sales Management

Policies, operation, coordination, and control of personal selling activities in marketing organizations.

ME 326 Thermodynamics

Properties, heat and work, first and second laws, thermodynamic processes, introduction to ideal power cycles.

EE 331 Electrical Circuits, Electronics, and Machinery

Brief theory of direct and alternating current circuits; single-phase and three-phase power transmission; electronic devices and

instrumentation; electromechanics.

Skills gained by Engineering Route to Business Majors

Problem-solving

Understanding and analyzing technical data

Leading and managing

Presenting technical information

DIRECT JOB OPPORTUNITIES

This sampling includes careers that use the problem-solving and communication skills typically acquired by Engineering Route to Business majors.

Competitive Analyst

Research and predict business plans of competitors. Read competitors' press releases, websites, media coverage, and travel/trade show plans. Train sales team members to assist in collecting information about competitors. Analyze all collected information, formulate recommendations and responses, and write analysis report for sales and product management department. Some employers require an MBA.

Field Marketer

Support either a specific sales team or a team in a particular geographic region and enable team to sell more effectively. Tasks are diverse and may include things such as tailoring sales information for a specific customer, coaching a salesperson on a particular sales presentation, managing an intranet site, or developing software to automate proposal generation.

Field Service Engineer

Install, repair, and maintain systems and products at customer sites. Provide product demonstrations and employee training. Visit customers to resolve technical problems by reviewing documentation and performing inspections. Build customer relationships and recommend technical solutions.

Financial Analyst

Analyze companies' financial situations and recommend ways to spend, invest, and manage money. Analyze financial statements and histories, assess industry trends, interview corporate officers, develop economic forecasts, and make recommendations through oral and written reports.

Information Systems Analyst

Determine organization's information needs, write detailed specifications, choose programming tools and methods, supervise code writing, test program and get feedback, and solve problems and add requested features. Work can be done on a consulting basis with the job title of Systems Consultant.

Patent Agent

Help businesses secure patents for new inventions such as pharmaceuticals, computer hardware, chemical processes, biotech products, and plant varieties. Work closely with inventors to prepare patent application. If registered by the U.S. Patent and Trademark Office (requires a bachelor's degree in science or engineering and passing score on examination), can represent companies in the patent application and discuss the application with patent examiners. Work for patent firms, law firms, corporate law departments, or on a freelance basis.

Patent Examiner

Review patent applications to assess compliance with regulations, determine scope of protection claimed by inventors, research relevant technologies to compare proposed patent with prior inventions, and communicate findings to patent agent or inventor. Work for U.S. Patent and Trademark Office.

Procurement Manager

Coordinate complex or time-sensitive purchases of raw materials needed by engineers to design and produce their products. Supervise staff of purchasing agents, actively seek out new technologies and suppliers, create systems to allow employees to buy their own supplies, and analyze market to determine future availability of materials.

Production and Logistics Manager

Coordinate life-cycle of a technical product, including acquisition, distribution, internal allocation, and delivery. Collaborate with other departments to meet customer needs and develop technical product management tools. Coordinate the compilation and analysis of technical source data needed for product development.

Project Manager

Plan, administer, and coordinate projects that relate to product development, product improvement, research for new ventures, new product sales launches, or organizational structure. Develop product schedules, allocate resources, interface with vendors, and hire, train, and supervise employees.

Sales Engineer

Sell complex technology products to technical buyers. Confer with customers and engineers to determine equipment needs and system requirements and possibly modify product configurations. Prepare and deliver technical presentations and product demonstrations to explain products. Provide technical and non-technical customer support.

MORE JOB OPPORTUNITIES

This section lists other opportunities that may be available to all business majors. Entry into these careers usually requires internship or volunteer experience or relevant coursework in addition to an Engineering Route to Business degree. This is a sampling of job opportunities; for more options and ideas, please visit the CSA&CC career information library.

ADVERTISING/MARKETING/SALES

Advertising and Promotions Manager

Plan and direct advertising policies and programs or produce collateral materials, such as posters, contests, coupons, or give-aways, to create extra interest in the purchase of a product or service for a department, an entire organization, or on an account basis.

Buyer

Purchase merchandise directly from manufacturers and resell it to retailers (wholesale buyer) or purchase goods from wholesalers for resale (retail buyer). Become expert in particular kind of merchandise (such as clothing or electronics), stay informed about new trends, analyze customers' buying preferences, and decide what merchandise employer will sell.

Customer Service Representative

Interact with customers to provide information in response to inquiries about products and services and to handle and resolve complaints.

Real Estate Agent

Operate real estate office, or work for commercial real estate firm, overseeing real estate transactions. Other duties usually include selling real estate or renting properties and arranging loans. Requires a state license.

Sales/Service Manager

Direct the actual distribution or movement of a product or service to the customer. Coordinate sales distribution by establishing sales territories, quotas, and goals and establish training programs for sales representatives. Analyze sales statistics gathered by staff to determine sales potential and inventory requirements and monitor the preferences of customers.

BUSINESS

Credit Analyst

Make recommendations to lending institutions about the level of risk associated with business and personal loan applicants. Contact banks, credit associations, and other organizations to obtain financial information. Prepare, analyze, and approve loan requests and write reports for bank executives recommending credit limits.

Insurance Agent

Assist companies and individuals in selecting the most appropriate insurance policies. Consult with clients, write reports, maintain records, and help process insurance claims.

A professional license is required, and business courses can be helpful.

Loan Officer

Provide guidance and information for prospective loan applicants. Analyze and verify clients' creditworthiness. May negotiate repayment plans with delinquent borrowers. Work for commercial banks, credit unions, and other financial institutions.

Management Consultant Analyst

Analyze business problems by collecting information from both internal and external sources, developing possible solutions, and then making recommendations to management team. Usually work for consulting firms, who hire recent college graduates for 2-3 year analyst positions.

Project Manager

Plan, administer, and coordinate projects that relate to product development, product improvement, research for new ventures, new product sales launches, or organizational structure. Develop product schedules, allocate resources, interface with vendors, and hire, train, and supervise employees.

Retail Manager

Oversee profitable operation of retail stores, including hiring and supervising employees, managing inventory, and managing the budget. May be responsible for merchandise promotions and advertising.

CORPORATE COMMUNICATIONS

Corporate Recruiter

Maintain contacts in the community and travel, often to college campuses, to seek qualified job applicants. Screen and interview applicants and makes job offers. Stay up-to-date on organizational hiring policies, equal employment opportunity, and affirmative action guidelines. Work for companies, government agencies, and non-profit organizations.

Diversity Officer

Research, analyze, and monitor staffing policies to achieve diversity goals. Conduct outreach activities to identify and attract qualified women and minority applicants for company openings.

Human Resources Specialist

Create and carry out human resource programs and policies including staffing, compensation, benefits, immigration, employee relations, training and health and safety programs. Assess employees for promotion.

Meeting & Convention Planner

Coordinate all aspects of group meetings and conventions, including speakers, location, audio-visual equipment, and publicity. Work for nonprofit organizations, professional associations, hotels, corporations, and government agencies.

Public Relations Specialist

Write articles for internal publications, write press releases, assemble press kits, arrange speaking engagements, assist in fundraising activities. Work in a variety of settings: business, government, non-profit, and education.

EDUCATION

College Academic Advisor

Advise business majors at all levels about selection of courses, schedule planning, and other academic issues. May present seminars and workshops and develop and implement academic programs and refer students to other campus resources.

College Admissions Officer

Evaluate freshman and transfer applicants; counsel and advise the general public including, but not limited to, prospective applicants, parents, faculty, and administration on admission-related issues; and participate in various recruitment and yield activities.

Corporate Trainer

Develop and conduct individual, group, and classroom training for employees on a wide variety of subjects. Develop training

manuals, handouts, procedures, and supplemental training materials. Other duties involve test creation and administration for the advancement of employees.

Disability Services Coordinator

Serve as an advocate for students with disabilities. Work with faculty to understand and provide reasonable accommodations for students with documented disabilities. Promote disability awareness on college campuses.

Residence Life Coordinator

Supervise undergraduate and/or graduate staff, develop residence hall community, respond to student concerns, manage administration and facilities, and participate in department initiatives and campus life.

ENVIRONMENT AND OUTDOOR

Green Marketing Analyst

Create innovative ways to introduce environmentally conscious products into the marketplace. Analyze sales data and consumer spending habits and consult with other marketing team members and graphic designers.

Outdoor Guide

Lead groups on trips involving outdoor recreational activities such as fishing, hiking, nature photography, wildlife observation, or canoeing. Provide educational information about physical environment, wildlife, climate, and ecology. Work for tour companies, ranches, parks, or on freelance basis.

Recycling Coordinator

Design and implement curbside and drop-off recycling and hazardous waste programs through city governments or private firms. Conduct public outreach campaigns to educate people about the advantages of recycling. May ensure compliance with ordinances or apply for grants.

Tour Guide

Escort individuals or groups on sightseeing tours or through places of interest, such as national parks, industrial establishments, public buildings, and art galleries

GOVERNMENT

Legal Assistant

Assist lawyers by researching legal precedent, investigating facts, or preparing legal documents. Conduct research to support a legal proceeding, to formulate a defense, or to initiate legal action.

Legislative Analyst

Perform quantitative and qualitative analysis of information needed by legislators and other government officials. Evaluate policy issues and options, write reports, conduct briefing meetings, and respond to inquiries.

Legislative Assistant

Meet with lobbyists, arrange committee and subcommittee hearings, assist in developing legislation and amendments. Respond to requests for information, prepare memos and reports based on completed research for legislators.

Lobbying Organizer

Distribute information about a particular issue or organization, recruit volunteers, solicit funds, and organize such efforts as rallies, letter-writing campaigns, and voter registrations drives. Work for special and public interest groups as well as professional lobbyists.

Political Party Staffer

Work to advance a political party's agenda by recruiting and training candidates, preparing for conventions, planning fundraisers and publicity events, and supporting elected officials. Internship experience is especially helpful.

HUMAN SERVICES

Americorps Volunteer

Serve full-time for a year in organizations and agencies throughout the country, work to fight illiteracy, improve health services, create businesses, increase housing opportunities, or bridge the digital divide. Benefits include an Education Award or an end-of-service stipend.

Community Organizer

Establish and organize community groups to solve social problems in the community. Assess strengths and weaknesses of existing resources and propose changes. Promote cooperation and coordination among government agencies, nonprofit organizations, and other community groups. Conduct research, prepare budgets, and assist in fundraising.

Corporate Foundation Worker

Help corporations support projects and social service agencies in the community by screening proposals, giving presentations, and advising company boards which projects to fund.

Volunteer Coordinator

Recruit, train, schedule and provide supervision to volunteers at non-profit organizations. Arrange for on-the-job and other required training, supervision and evaluation of volunteers. Serve as liaison between administration, staff, and volunteers.

INTERNATIONAL

Foreign Service Officer

Analyze and report on political and economic developments, including agricultural trends, humanitarian and social conditions. Identify export markets, negotiate international agreements, and interpret US policies and interests for foreign governments, opinion leaders and publics. Issue visas to foreign nationals, provide development assistance, and arrange cultural exchanges.

Import/Export Agent

Coordinate settlements between domestic and foreign sellers and buyers. Oversee delivery of goods, supervise shipping and receiving, and act as trade representative. Oversee assessment of import and export taxes and handle any customs concerns.

Intelligence Officer

A member of the armed forces, police officer or civilian intelligence agency who specializes in the gathering, fusion and analysis of information and intelligence in order to provide advice to their government or another organization.

Peace Corps Volunteer

Peace Corps Volunteers work internationally in the following areas: education, youth outreach, and community development; health and HIV/AIDS; agriculture and environment; business development; and information technology. Within these areas, the specific duties and responsibilities of each Volunteer can vary widely.

MEDIA/PUBLISHING

Copy Editor

Act as liaison between author, editor, and proofreader. Review manuscripts for grammar and style usage. May develop in-house style guide, supervise freelance staff, and handle author queries.

Copywriter

Write articles, bulletins, sales letters, speeches, and other related informative, marketing and promotional material for use by publication or broadcast media to promote sale of goods and services.

Grant Writer

Write and develop grant proposals, which includes conducting needs assessments and matching product needs with available funding. Work for government or non-profit agencies.

Staff Writer

Research and write articles for magazine. May write article promos, short features, author bios, or photo captions. May work on freelance basis or for one particular magazine.

Travel Writer

Write features with detailed, accurate, timely and up-to-date information regarding destinations, hotels, restaurants, tours, activities, etc, using a variety of sources of information. Involves

thorough research and travel.

RESEARCH

Information Broker

Perform research for clients in business, healthcare, government, law, and science. Uses Internet, database, and library resources to find specific information. May also analyze information, write reports, and train clients in information retrieval. Often work for consulting firms or on freelance basis.

Institutional Researcher

Write institutional and policy histories; research and report on current issues, long-range trends; edit records; manage archives. Work for government agencies, private corporations, public archives and libraries.

Market Research Analyst

Research market conditions in local, regional, or national areas to determine potential sales of a product or service. May gather information on competitors, prices, sales, and methods of marketing and distribution. May use survey results to create a marketing campaign based on regional preferences and buying habits.

Publications Researcher

Research story and script ideas; maintain research files on topics and people; verify stories for accuracy. Work for newspaper, magazine, or book publishers.

Survey Researcher

Design or conduct surveys. May supervise interviewers who conduct the survey in person or over the telephone. May present survey results to client.

SOURCES

Sales and Marketing Careers in the Tech Sector by David K. Wolpert. Swordfish Communications, 2008.

Career Opportunities in Engineering by Richard A. McDavid and Susan Echaore-McDavid. Checkmark Books, 2006.

UT Engineering Route to Business: www.mcombs.utexas.edu/udean/major