

Engineering Program of Study

Engineering



A program of study serves as a guide, along with other career planning materials, as learners continue along a career path. Courses listed are only recommended coursework and should be individualized to meet each learner's educational and career goals.

Ultimately, a program of study should be customized with course titles and appropriate high school graduation requirements as well as college entrance requirements. Additional career exploration opportunities should also be offered at upper elementary grade levels to promote higher engagement and learner focus in subsequent years. Student Success Plans outlining career goals should be utilized through the advisement process.

Requires on-the-job training or industry-recognized credential

- Behavioral Technician
- Child Care Worker
- Office Clerk
- Office Support Assistant
- Payroll Clerk

Requires an associate degree

- Account Manager
- Executive Assistant
- Payroll Specialist
- Sales Supervisor

Requires a bachelor's degree

- Actuaries
- Business Operations Specialist
- Human Resource
- Office Coordinator
- Office Manager

Requires an advanced degree

- Business Operations Manager
- Fiscal Manager
- Management Consultant

Sample occupations



Illinois
State Board of
Education

Course examples

Computer Concepts and Software Applications (10004A001)

Computer Concepts and Software Applications is an orientation-level course designed to develop awareness and understanding of application software and equipment used by employees to perform tasks in business, marketing, and management. Students will apply problem-solving skills to hands-on, real-life situations using a variety of software applications, such as word processing, spreadsheets, database management, presentation software, and desktop publishing. Students will explore topics related to computer concepts, operating systems, telecommunications, and emerging technologies. The development of employability skills, as well as transition skills, will be included in the course as well as an understanding of the ethical considerations that arise in using information processing equipment and gaining access to available databases

Introductory Business (12051A001)

Introductory Business courses survey an array of topics and concepts related to the field of business. These courses introduce business concepts such as banking and finance, the role of government in business, consumerism, credit, investment, and management. They usually provide a brief overview of the American economic system and corporate organization. Introductory Business courses may also expose students to the varied opportunities in secretarial, accounting, management, and related fields.

Business Management (18001A001)

Business Management courses acquaint students with management opportunities and effective human relations. These courses provide students with the skills to perform planning, staffing, financing, and controlling functions within a business. In addition, they usually provide a macro-level study of the business world, including business structure and finance, and the interconnections among industry, government, and the global economy. The course may also emphasize problem-based, real-world applications of business concepts and use accounting concepts to formulate, analyze, and evaluate business decisions.

Basic Economics (12015A001)

Business Economics courses integrate economic principles (such as free market economy, consumerism, and the role of the U.S. government within the economic system) with entrepreneurship/business concepts (such as marketing principles, business law, and risk).

Financial Accounting (12111A001)

Financial Accounting courses introduce students to the principles and concepts of financial accounting that produces summary financial statements primarily for users external to a business. Topics include preparation, interpretation, and analyses of financial records and statements; the accounting cycle; current and long-term liabilities and owners' equity; and the accounting of assets

Business Management Workplace Experience (12098A001)

Business Management Workplace Experience courses provide students with work experience in fields related to business management. Goals must be set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses must include classroom instruction at least once per week, involving further study of the field, discussion of relevant topics that are responsive to the workplace experience and employability skill development. Workplace Experience courses must be taught by an approved WBL educator-coordinator. These courses should be aligned to a Career Development Experience that could include: Student-led Enterprises; School-based Enterprises; Immersion Supervised Agricultural Experiences; Clinical Experiences in Health Science and Technology programs; Internships; and Apprenticeship programs including Youth Apprenticeships, Pre-apprenticeships, and Registered Apprenticeships.

Full sequence

	Grade	English	Math	Science	Social Studies	Required Courses, Electives, and Learner Activities	Career and Technical Courses
Middle School	7	ELA 7	Math 7	Science 7	Social Studies 7		Career Exploration
	8	ELA 8	Math 8	Science 8	Social Studies 8		Employability Skills
Secondary	9	ELA 9	Algebra I	NGSS Aligned Science	U.S. History	All programs of study should meet local and state high school graduation requirements and college entrance requirements. Participation in a Career and Technical Student Organization is also important for developing appropriate skills and competencies.	Computer Concepts and Software Applications*
	10	ELA 10	Geometry	NGSS Aligned Science	World History or Economics		Introductory Business*
	11	ELA 11	Algebra II	NGSS Aligned Science	U.S. Government* or Psychology*		Business Management* Business Economics
	12	Transitional English or English Composition*	TM QL & Statistics or TL STEM* or College Algebra*	NGSS Aligned Science	Microeconomics* or Macroeconomics*		Financial Accounting* Business Management Workplace Experience
Postsecondary	13	English Composition†	Algebra** Statistics	Science	Microeconomics** or Macroeconomics** or Psychology	All programs of study should meet learner's career goals with regard to required degrees, licenses, certifications, or journey worker status. Participation in appropriate student organizations is also important for developing appropriate skills and competencies.	Continue required courses in learner's chosen area of specialization to complete the desired certification and/or credential.
	14						
	15	Continue courses in learner's chosen area of specialization.					
	16	Continue courses in learner's chosen area of specialization.					

* AP/dual credit opportunities

** Skip to next course in sequence if accomplished through credit transfer opportunity

† Postsecondary course affiliated with Illinois Articulation Initiative Code

Additional opportunities

Early career opportunities learning about work

- Career Planning
- Career Fairs
- Industry Speakers
- Informational Interviews
- Career Presentations
- Worksite Tours
- Cooperative Education
- Job Shadow
- Simulated Skill Development
- Other

Credit Transfer and WBL opportunities

- Dual Enrollment/Dual Credit
- Advanced Placement
- Articulated Credit
- Career-Related Service Learning
- School-Based Enterprise
- Student-Led Enterprise
- Project-Based Learning
- Internships
- Apprenticeships (e.g., youth, pre-registered, non-registered, research)
- Other

Industry-recognized credentials

- Certification
- License
- Other

Student organizations

- Business Professionals of America
- Educators Rising
- Future Business Leaders of America
- Family, Career and Community Leaders of America
- National FFA Organization (Illinois Association FFA)
- Future Health Professionals
- Illinois Distributive Education Clubs of America
- Science Olympiad
- Skills USA Illinois
- Technology Student Association
- Other
- Team-Based Challenge