

DATA CENTER OPERATIONS ENGINEERING TECHNOLOGY, ASSOCIATE OF APPLIED SCIENCE



College(s): DA

Program Code: 0535

The Associate of Applied Science in Data Center Operations Engineering Technology provides comprehensive preparation for careers in mission-critical data center facility operations. This degree includes in-depth coursework in power systems, computer and building operations, and industrial cooling and refrigeration technologies. Students develop the technical and analytical skills needed to operate, maintain, and integrate the electrical, mechanical, and cooling systems that support high-availability data centers. The AAS prepares graduates for mid-level facilities technician roles with opportunities for career progression across data center operations, infrastructure support, and building systems management. This pathway also provides a pathway for transfer to related BS programs.

Program Requirements

Code	Title	Hours
General Education Coursework		
ENGLISH 101	Composition	3
MATH 140	College Algebra	4
General Education Fine Arts / Humanities Course ¹		3
PHYSICS 131	Mechanics And Power (or other General Education Physical Sciences or Life Sciences course)	3
HISTORY 113	United States Labor History (or other General Education Social and Behavioral Sciences Course) ¹	3
Required Program Core		
AIR CON 159	Industrial Cooling and Refrigeration	3

AIR CON 204	Advanced Control Systems	3
CIS 111	Computer Operations (Electrical and Electronics Engineering Technology)	3
340MFGT 105	Introduction to Advanced Manufacturing I (Electrical and Electronics Engineering Technology)	3
340MFGT 106	Introduction to Advanced Manufacturing II	3
340MFGT 107	Introduction to Advanced Manufacturing III	3
340MFGT 108	Robotics I	3
340MFGT 120	Power Systems I	3
340MFGT 126	Electrical and Electronic Circuits I	3
340MFGT 128	Intro to Data Center Operations	3
340MFGT 188	Industrial Electricity I	3
340MFGT 189	Industrial Electricity II - Motors	3
340MFGT 287	Maintenance Technologies I	3
340MFGT 288	Industrial Electricity III - PLC's I	3
NET TEC 121	Internetworking I	3
Total Hours		61

¹ One course must fulfill the Human Diversity (HD) (<https://catalog.ccc.edu/hd/>) requirement

Pathway

This is an **example course sequence** for students interested in pursuing Data Center Operations Engineering Technology. This does not represent a contract, nor does it guarantee course availability. If this pathway is followed as outlined, you will earn a Basic Certificate (BC) in Manufacturing Technology, a Basic Certificate (BC) Data Center Operations Foundations, and an Associate in Applied Science (AAS) in Data Center Operations Engineering Technology.

Semester-by-Semester Program Plan for Full-Time Students

All plans can be modified to fit the needs of part-time students by adding more semesters.

Semester 1		Hours
ENGLISH 101	Composition ¹	3
MATH 140	College Algebra (1)	4
340MFGT 105	Introduction to Advanced Manufacturing I	3
340MFGT 106	Introduction to Advanced Manufacturing II	3
340MFGT 188	Industrial Electricity I	3
Hours		16
Semester 2		Hours
340MFGT 107	Introduction to Advanced Manufacturing III	3
340MFGT 108	Robotics I	3
340MFGT 189	Industrial Electricity II - Motors	3
340MFGT 288	Industrial Electricity III - PLC's I	3
HISTORY 113	United States Labor History (or other general education Social and Behavioral Sciences course) ¹	3
Hours		15
Semester 3		Hours
AIR CON 159	Industrial Cooling and Refrigeration	3
340MFGT 120	Power Systems I	3
340MFGT 126	Electrical and Electronic Circuits I	3
340MFGT 128	Intro to Data Center Operations	3
340MFGT 287	Maintenance Technologies I	3
Hours		15
Semester 4		Hours
Fine Arts or Humanities course (HD) ^{1, 2}		3
AIR CON 204	Advanced Control Systems	3
CIS 111	Computer Operations	3
NET TEC 121	Internetworking I	3
PHYSICS 131	Mechanics And Power (or other Physical Sciences or Life Sciences general education course) ¹	3
Hours		15
Total Hours		61

¹ General Education course

² One course must satisfy the Human Diversity (HD) (<https://catalog.ccc.edu/HD/>) requirement

Choose your courses with your College Advisor.

Careers

This program can prepare students for the jobs listed below. Click on each one to learn more, including average earnings, annual job openings, and how much education people in that field have. For additional guidance and resources on career options, current City Colleges students and alumni can contact the Career Services Office (<https://www.ccc.edu/departments/Pages/Career-Services.aspx>).

Data Warehousing Specialists

Job Description

Design, model, or implement corporate data warehousing activities. Program and configure warehouses of database information and provide support to warehouse users.

Salary Based on Experience Level

Take a look at the average hourly/annual earnings for this career in Cook County

Lightcast earnings figures are based on OES data from the BLS and include base rate, cost of living allowances, guaranteed pay, hazardous-duty pay, incentive pay (including commissions and bonuses), on-call pay, and tips.

Annual Wages

Entry-Level 10 th Percentile	\$104,350
Median 50 th Percentile	\$154,350
Senior-Level 90 th Percentile	\$211,292

Hourly Wages

Entry-Level 10 th Percentile	\$50
Median 50 th Percentile	\$74
Senior-Level 90 th Percentile	\$102

Annual Job Openings

48 annual openings in Cook County

National Education Attainment

Here, you can see the level of education that people in this career complete.

Degree Program	% of Jobs
A high school diploma or less	4.35%
A certificate	4.35%
Some college	4.35%
An Associate degree	4.35%
A Bachelor's degree	78.26%
A Master's or Professional degree	4.35%
A Doctoral degree or more	0.00%

82.61% continue their education beyond an associate degree