



Course Syllabus
SEMESTER
School of Science, Technology, Engineering, and Mathematics

Course Name	Fluid Power: Pneumatics/Logic
Course & Section Number	SKT 153-XXX
Meeting Day(s) & Time(s)	
Credits	3
Contact Hours	Lecture: 2 hours, Lab: 2 hours
Instructor's Name	
Office Hours & Location	
Phone	
OCC Email *	

* Please use only Owens's email for course communications.

Catalog Description

Studies principles, gas laws, calculations, ANSI symbols and terminology of pneumatic systems. Emphasizes control of compressed air, pneumatic power and fluid logic.

Prerequisites/Co-Requisites

MTH 143 or equivalent with a 'C' or better

Course Materials

Basic Pneumatics

By Hooper, Jay F.

ISBN: 9781611634112

Publisher: Carolina Academic Press

*If a **print book, e-book, or access code** is required for class, you can access the Owens Community College e-Campus Bookstore by accessing the course link called "Find Books" on the course schedule for each course section. See the example picture below.*

Course		Course Title				Credit Hrs.	Course Fees	Seats	
Academic Period		Academic Period Dates		Class Type	Course Links				
Days	Times		Room Dates	Instructor	Meeting Type	Building/Room	Location		
SKT131-002		Electrical Prints				3	\$0	20	16
2025 Fall Semester		2025-08-25 - 2025-12-11		Face-to-Face		[Course Info] [Find Books]			
T	8:00 AM - 10:40 AM		2025-08-25 - 2025-12-11	Todd Schick		Lecture	DC 111	Toledo	
Last day to add: Aug 29, 2025 -- Last day to drop: Dec 11, 2025									
Refund deadlines: Aug 29, 2025 (100%) -- Sep 05, 2025 (60%) -- Sep 12, 2025 (50%)									

OER and Owens Community College Library Resources (*Open Educational Resources are free online materials for instructor and student use. Some OER material may be available in print in the Owens Community College Library.*)

Inclusive Access (I.A.) Materials are included in the cost of the course to save students money through lower negotiated rates with publishers. Courses containing I.A. materials will have it noted on the online class schedule. If your course includes I.A. digital materials, you will receive an email with subject line, “Your inclusive Access Materials,” and it will include any codes or digital links.

The email will come to your Owens Community College email from the Owens e-Campus Bookstore on the first day of class, if not before. Be sure to check your spam (junk email) if you do not find it in your inbox. If the email is not in your inbox or spam folder, contact your instructor immediately. You may also see a folder at the top of your course labelled “Course Materials by eCampus.” This folder will contain any needed codes or links to needed materials.

If the I.A. materials also include a printed book or are in print form, the item will be shipped to your address of record automatically based on your enrollment in the course. Please note that some courses do not include printed materials in I.A and those materials would need to be purchased separately using the link on the course schedule. When you access the Find Books link you will see which items in a course are included in I.A.

Technology and Tools (software/hardware requirements)

None

What You Will Learn in the Course

Course Objectives

Students will learn how to troubleshoot, repair, and modify air delivery and pneumatic systems.

Student Learning Outcomes

Upon the successful completion of this course, students will:

Student Learning Outcome	Where Assessed
Understand the basic science and functions of fluid power pneumatic systems.	Unit quizzes/exams; pneumatic principles homework; lab performance checks
Recognize a well-designed air delivery system.	Air delivery system design/analysis assignment; lab activity (FRL/regulator setup); quiz items.
Read pneumatic system schematic prints and identify potential solutions to problems within pneumatic systems.	Schematic interpretation assignments; troubleshooting lab(s); practical exam or lab check-off.
Understand and identify pneumatic components and their functions.	Component ID quiz; lab demonstrations/check-offs; homework/worksheet on component functions.

Program Outcomes

The following program outcomes are assessed in this course:

Outcome	Where Assessed
Read and interpret mechanical/manufacturing prints	Pneumatic schematic print reading assignment(s); troubleshooting scenario(s) using schematics.
Use tools/equipment safely and effectively	Lab safety and tool use check-off; lab participation/performance rubric.
Adhere to OSHA safety standards relevant to lab environments.	Safety orientation acknowledgement/quiz; ongoing lab safety observation rubric.
Use reference resources to solve problems.	Specification sheet/manual-based assignment; troubleshooting documentation requiring reference use.

Institutional General Education Competencies

As a student at Owens Community College, you will take general education courses as part of your degree program. Skills and knowledge specific to general education courses will be reinforced in many of your degree program major courses and may be measured in your capstone course(s) and others as identified.

Competency	Where Assessed
Communicate effectively.	All tests and the final
Act with professional responsibility.	Post lab questions, all tests and the final
Demonstrate sensitivity to others' beliefs and values.	Team-based lab activities with peer collaboration expectations, and Peer/instructor collaboration feedback (participation rubric item)
Think analytically, critically, and creatively.	Post lab questions

Technology, Lab, and File Requirements:

You must bring your own safety glasses, closed toed non-skid shoes and clothing without loose sleeves or drawstrings.

Academic Support

Disability Services

If you have a disability or acquire one, you may be entitled to receive reasonable accommodations intended to assure you an equal opportunity to participate in and benefit from the program. To receive more information or to register for accommodations, please contact the Disability Resource Center at 567-661-7007, email disability@owens.edu, visit <https://www.owens.edu/disability/>, or stop by College Hall 116.

Tutoring Services

Owens Community College offers academic tutoring and assistance in a variety of subjects including: accounting, computing, economics, mathematics, science, and writing. For more information go to: <https://www.owens.edu/successcenters/>

Counseling Services

Owens Community College provides assistance to students experiencing personal, educational, interpersonal/relationship, family, social, or psychological difficulties. If you feel you may benefit from this service, please contact them at counselingservices@owens.edu. More information is at <https://www.owens.edu/counseling/>

Campus and Community Connections

The Center for Campus and Community Connections (College Hall 151) is a walk-in office created to provide retention support through resource stability initiatives and community connections. Go here for more information: <https://www.owens.edu/connection/> or contact connections@owens.edu

Owens Library

The Owens Library offers two locations (Toledo and Findlay) as well as online resources. For more information visit <https://www.owens.edu/library/>.

General Information

Student Code of Conduct

All students are expected to follow Owens Community College's Student Code of Conduct, which includes academic honesty, encompassing plagiarism. See the Board Policy for more information. If you are unfamiliar with the Student Code of Conduct and Board Policy on academic honesty and plagiarism, they can be found at:

Student Code of Conduct: www.owens.edu/conduct/

Board Policy: www.owens.edu/media/trustees/board_policies/11-2-33.pdf

Anti-Discrimination and Harassment & Title IX/Sexual Misconduct

All students, faculty, and staff are expected to follow Owens Community College's Anti-Discrimination and Harassment Policy and the College's Title IX/Sexual Misconduct Procedures and Guidelines. The College strictly prohibits and will not tolerate harassment, discrimination, intimidation, or hostile/offensive working or learning environments.

If you are unfamiliar with the Anti-Discrimination and Harassment Policy, it can be found at:

https://www.owens.edu/media/trustees/board_policies/11-4-17.pdf

If you are unfamiliar with the Title IX/Sexual Misconduct Procedures and Guidelines, it can be found at: <https://www.owens.edu/trustees/wp-content/uploads/sites/45/2020/08/11-4-17-Title-IX-Sexual-Misconduct-Procedures-and-Guidelines.pdf>

Religious Accommodations

A student seeking an accommodation for an absence permitted under Ohio's Testing Your Faith Act must provide the instructor with a written email notice with the specific dates for an absence, and must do so not later than fourteen (14) days after the first day of instruction. Alternative accommodations are not retroactive, and no academic penalty will be imposed for an absence under the policy*. The request for an alternative accommodation will be kept confidential.

Students with questions about a religious accommodation under Ohio's Testing your Faith Act may contact the College's Office of Academic Affairs: provost@owens.edu

The policy may be found on the Owens website: [3358:11-2-63](#) - Accommodation for a Student Absence for the Observance of Religious Beliefs and Practices Policy.

Document Collection

Throughout the semester, your instructors may ask for a variety of assignments including tests and/or quizzes for student learning of institutional general education competencies or program assessment. Please save all your class materials until the end of the semester.

Classroom Admittance

OCC classes shall only be attended by the officially registered OCC students or prospective students, instructor of record, guest lecturer, or substitute. Visitors are not permitted to be in the classroom and should not be invited to attend or participate in the class. See Family Educational Rights and Privacy Act (FERPA) regulations for more information:

<https://studentprivacy.ed.gov/ferpa>

Use of AI Tools: This course requires you to complete various assignments that assess your understanding and application of the course content. You are expected to do your own work and cite any sources you use properly. You are not allowed to use any artificial intelligence (AI) tools, such as chatbots, text generators, paraphrasers, summarizers, or solvers, to complete any part of your assignments. Any attempt to use these tools will be considered academic misconduct and will be dealt with according to the Owens Community College academic integrity policy. Students are expected to complete all work independently and without the assistance of AI-generated content. If you have any questions about what constitutes acceptable use of AI tools, please consult with the instructor *before* submitting your work.

Student Responsibilities & Instructor Expectations

Late Work (work turned in after assigned due date)

1. Blackboard Exams must be taken during the posted time frame. In class exams must be taken during class. Extenuating circumstances, such as school approved absences will be offered make-up exams. (Bereavement, Hospitalization, etc.)
2. Online tests/quizzes/homework will have due-date limits set. You must complete the online work within the specified time frame. After the time limit (due-date) is reached, the form will stop accepting responses.
3. Hardcopy work (paperwork assignments) -- 5% of grade will be deducted for each calendar day late.
4. Work turned in after 7 calendar days will be evaluated by instructor, but the student will receive no more than 50% for their grade on the assignment. After 10 calendar days the student will receive a zero.

Specific Course Rules

Safety is our number one concern in both the lab setting and classroom. Any student that is found to cause a hazardous situation either to themselves or others will be removed from the lab/classroom. All students in the classroom/lab should be able to feel safe and receive a positive learning environment.

Cell phones and devices: Over the past few years cell phones have become a major issue in the classroom and lab. The phones and other devices become a major distraction to the learning environment if not used correctly. Students will have projects to be working on when bookwork is done; there is limited need for them to have their phones or electronics out in class.

“Personal digital devices equipped with picture taking or video capabilities, text messaging, and Internet access can add value to the learning process when used appropriately.” Student personal digital devices that are brought to college or enroute to or from college or any college sponsored activity;

- Remain the sole responsibility of the owner. The college is not liable for damage, loss, or theft.
- At the college level may be used responsibly during non-instructional time and/or during instructional time for educational purposes when requested and supervised by a staff member.
- With video or picture taking ability may not be used at any time or place where individuals have an expectation of privacy such as restrooms or locker rooms.
- Photographs or images of individuals may not be taken or recorded without the person's knowledge and permission.

- May not be used to harass, intimidate, or bully anyone, at any time.
- May not be used in any way that detracts from the “learning environment of the college.”

Bullying is a serious topic in any setting. Bullying will not be tolerated and if a student is found to be unable to conduct themselves properly they will be reported to the office and college policies will be followed. This may include the student being removed from the Program. All students deserve a positive learning environment. Please contact me if there is ever an issue. I cannot help if I don't know there's an issue!

How Grades are Determined and Major Assignments

Evaluation Measure The grade points for the areas of work are as follows.	Student Learning Outcomes Assessed	Value
Evaluation 1	1-5	50 points
Evaluation 2	5-8	50 points
Evaluation 3	9-11	50 points
Final	1-11	100 points

The final course grade is to be computed using the following average point distributions.

Evaluation Measure	Value	Student Learning Outcome Assessed
Class Participation:	10 %	1-12
Activities:	20%	1-12
Homework:	20%	1-12
Assessments:	30%	1-12
Final Exam:	20%	1-12

Grading Procedure:

Grades will be calculated on the following scale.

90% and Above	A
80% to Less than 90%	B
70% to Less than 80%	C
60% to Less than 70%	D
Less Than 60%	F

Tentative Class Assignments

Week	SLO	Topic	Activity
1	1, 4	Topic: Introduction and Safety discussion	
2	1, 4	Topic: Discussion of Chapters 1, 2, and 4	Readings: Chapter 3 Lab: Exercise 1
3	2	Topic: Distribution Systems	Readings: Chapters 4 & 5 Lab: Exercise 2
4	3, 4	Topic: Valve-Related Schematic Symbols	Readings: Chapter 6 Quiz: Test 1 Lab: Exercises 3 & 4
5	1, 4	Topic: Force Equations for Cylinders	Readings: Chapter 6 Lab: Exercise 5
6	1, 4	Topic: Force Equations for Cylinders	Readings: Ch. 7 Pgs. 55-59 Lab:
7	4	Topic: Low Pressure Pneumatic Fittings	Readings: Ch. 7 Pgs. 60-68 Lab: Exercise 6
8	1-4	Mid Term Exam	
9	2, 4	Topic: Low Pressure Pneumatic Fittings	Readings: Pgs.73-75 Quiz: Test 2 Lab: Exercise 7
10	2, 3	Topic: Discussion of Pneumatic Class Project	Readings: Chapter 9 Assignment: Research High Volume Fast Operating Air Valves Lab: Exercise 7 Modified
11	2, 3	Topic: Piping Schedules	Assignment: Research Volumetric Demands Lab: Prepare for class project
12		No Class – Veteran’s Day	
13	2, 3, 4	Project Work	Readings: Chapter 8 Lab: Class project
14	2, 4	Topic: Secondary Air Treatments	Lab: Exercises 8 & 9
15	1-4	Topic: Review	Lab: Test Class Project
16	1-4	Final Exam	

Disclaimer: The instructor reserves the right to amend this syllabus as deemed necessary and will communicate such amendment to the students in the course. Please note that while unlikely, there is a possibility courses might need to change the delivery method due to external issues like public health concerns, weather issues, etc. If this happens, the college will communicate any changes via email and/or other communication methods.