# Automotive Brake Systems
# Aut 1165 (Honda Content)

***This syllabus maybe subject to change, and is just a guide for class format!!***

**Instructor:** Justin Morgan
**Office:** 20-244
**Phone:** office 937-512-2513 or cell 618-978-9426 Text accepted
**E-Mail:** justin.morgan8747@sinclair.edu
**Office Hours:** Monday – Friday 12-1 pm, or by appointment
**Class Hours:** Mon, Wed, Fri 1- 4:15 pm from (Oct 21 – Dec 13)

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| **Grading Criteria:** | **90-100%** | **A** |
| | **80-89%** | **B** |
| | **70-79%** | **C** |
| | **60-69%** | **D** |
| | **Below 60%** | **F** |

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| **Grading Percentages:** | **Pop Quizzes** | **30%** |
| | **Midterm/Practical** | **30%** |
| | **Final/Practical** | **30%** |
| | **Homework/lab sheets** | **5%** |
| | **Resume & Cover letter** | **5%** |

* The instructor at his discretion can increase a students final grade by 2%, if it will raise grade to the next higher letter grade! This is only used to help a student, and never to hurt a student's grade. This will be based mainly on class participation and attendance**.**

**Attendance Policy:**

- Attendance will be taken each day
- Students whom are late or absent will be documented. (3 tardies = 1 absence)
- Two absences will not be counted against you
- If 4 absences are obtained, your final grade will result in an "F" or maybe administratively withdrawn per the auto department attendance policy.
- If you are going to be late or absent, notify your instructor via email, text, phone call etc. (Just like if you were going to be late or miss work).
- A quiz missed due to absence will be a zero!

## In order to receive Honda and Sinclair Community College credit you must have proof of (ie: printed training history) all Honda modules are completed by the last day the course meets to pass the class. Failure to do so will result in an "F"!

*Students are responsible for informing the instructor of any instructional accommodations and/or special learning needs at the beginning of the quarter!

**Textbook:** *Automotive Brake Systems* by James D. Halderman (Sixth Edition)

**Cell phone policy:** *Cell phones are not permitted during lab or lecture. Phones should be in the silent mode, vibrate, or preferably turned off. Failure to comply with this rule after an initial warning will result in confiscation of the phone until the end of class or removal of the student for the class period.*

**Tools Requirements:** Safety Glasses, Basic hand tool set, and DVOM.
*Not required but beneficial- drum brake service tools, caliper sockets, micrometer, c-clamp, disc brake w/integral parking brake retractor, etc.

**Testing:** *Midterm and Final exams are completed on-line at my.sinclair.edu and students are expected to have their my.sinclair passwords and user name for the midterm and final. You can contact the HELP desk at 512-HELP for a password reset.*

**Service Information websites:** **www.ondemand5.com**
**Username: Halderman** **Password: Steveash**

**Write a resume and cover letter for a job posting as a technician.**

- You will participate in a presentation on resume and cover letter writing
- Assignment should be revised at least once by SCC career services
- Resume and cover letter should reflect career services presentation
- Cover letter and resume hard copy must be submitted the last day of class

Lecture and Lab Activities Schedule:

Week 1

Day 1: Introduction, Lifting Vehicles & Tire/Wheel Service

Day 2: Power Brake Service, Operation, & Diagnosis Pascal's Law Worksheet (Chapter 5)

Day 3: Master Cylinder Operation, Service, & Diagnosis (Chapter 16)

*Homework: Chapter 5 & 16 Review Questions*

Week 2

Day 1: Brake Bleeding Service R&R Master Cylinder (Chapter 8) *(BKS 33 1-11)*

Day 2: Brake Hoses & Line Flaring (Chapter 7)

Day 3: Disc Brake Operation & Service (Brake job) (Chapter 12)

*Homework: Chapter 7, 8, & 12 Review Questions*

Week 3

Day 1: Disc Brake Caliper Service & Diagnosis (Chapter 13)

Day 2: Drum Brake Operation & Service (Brake Job) (Chapter 10)

Day 3: Drum Brake Wheel Cylinder Service & Diagnosis (Chapter 11)

*Homework: Chapter 10, 11, & 13 Review Questions*

Week 4

Day 1: VETERANS DAY OFF

Day 2: Hydraulic Valves, Switches, Lights. Drum brake review (Chapter 6)

Day 3: *Midterm and Practical* – Computer Lab Midterm

*Homework: None (Read chapter 6)*

Week 5

Day 1: Wheel Bearing Operation, Service, & Diagnosis (Chapter 9) *(BKS 33 11-12)*

Day 2: Parking Brake Operation, Service, & Diagnosis (Chapter 14) *(BKS 33 11-12)*

*Homework: Chapter 9 & 14 Review Questions*

Day 3: Disc and Drum Service Measurements *(BKS 34)*

Week 6

Day 1: Brake Lathe Operation (Chapter 15)

Day 2: THANKSGIVING

Day 3: THANKSGIVING

*Homework: Chapter 15 Review Questions*

Week 7

Day 1: Brake Lathe Operation and Service *(BKS 35)*

Day 2: Diagnosing Brake Concerns and Disc brake & Drum brake *(BKS 34 cont.)*

Day 3: ABS Operation (Chapter 18)

*Homework: Chapter 18 & 20 Review Questions*

Week 8

Day 1: ABS Service & Diagnosis (Chapter 19)

Day 2: Student Vehicles

Day 3: *FINAL & LAB PRACTICAL* - (Last Day for all Modules to be turned in & complete) Computer Lab Reserved

# BRAKES TOOL LIST

- Safety Glasses
- Drum Brake Tool kit
  - Hold down spring remover
  - Return Spring remover (two kinds)
- C-clamp
- ¼" Drive Socket Set & Ratchet
  - Metric- 5-12 mm
  - Standard- ¼ - 9/16"
- 3/8" Drive Socket Set & Ratchet
  - Metric- 8-19 mm
  - Standard- 3/8- 13/16"
- Various Extensions for the socket set
- Pliers
- Adjustable Wrench
- Side cuts
- Screw drivers
  - Flat head-various sizes
  - Phillips-various sizes
- Torx Driver
  - T10-T30
- Ball peen hammer

## Not required, but beneficial

- Rear Disc Brake Piston  Retractor
- Allen head sockets
- Fused jumper wires
- Digital multi-meter

**2013 HONDA/ACURA Brakes**
**Required Modules**

**SELF STUDY MODULES DUE ON DAY OF MIDTERM**
*Will be scored as a quiz grade.

BKC-08 Brake Inspection
BKC-16 Brake Pad and Shoe Replacement
BKC-32 Braking Systems Inspections
BKC-33 Servicing Brake Systems
BKC- 34 Brake System Measurements
BKC-35 Brake Rotor Resurfacing
BKC-60 Intro to hydraulics
BKC-61 Standard braking system components

**SELF STUDY MODULES DUE ON LAST DAY OF CLASS**

BKC-20 Intro to Vehicle Stability Assist
BKC-26 Hill Start Assist Systems
BKC-31 ABS Principles of Operation
BKC-36 Compact ABS Construction and Function
BKC-37 Compact ABS Troubleshooting
BKC-38 Traction Control C & F
BKC-50 Brake Drum Refinishing
BKC-51 Integrated braking system

**BK 1165 Class Modules Completed During Class (Not on PACT curriculum)**

BKS-33 Conventional Brake System Service
BKS-34 Brake System Inspection & Measurement
BKS-35 Brake Disc Resurfacing

*A print off of Honda Training Completed from IN HONDA will be turned in at the beginning of the last day of class, to receive Honda and Sinclair Credit! Failure to do so will result in an F.