

Please note that MTC students are required to wear a face covering while in public settings on MTC campuses, such as common spaces, meeting rooms, hallways, classrooms, and labs. If a student develops COVID-19 symptoms, they should notify Student Development Services at (803) 732-5201 and should NOT come to campus. COVID-19 updates can be found at <https://www.midlandstech.edu/student-information>.

Midlands Technical College
CPT-244 – Data Structures
Information Systems Technology Department – School of STEM
Semester: Spring/Summer/Fall

Catalog Course Description: This course examines data structures widely used in programming. Topics include linked lists, stacks, queues, trees, and sorting and searching techniques.

Prerequisite(s): CPT 236

Credit Hours: 3.0 Semester Hours

D2L Brightspace Login Page: <https://elearn.midlandstech.edu>

Instructor: Please see the “Instructor Information” webpage in the D2L course for more information about the course schedule and instructor information.

Departmental Assistant: Kristine Newton, newtonk@midlandstech.edu, (803) 738-7776

Program Director: Dr. Bruce Martin, martinb@midlandstech.edu, (803) 790-7505

Department Chair: Wanda Burwick, burwickw@midlandstech.edu, (803) 738-7761

Textbook(s): ***Core Java Volume I - Fundamentals***, 11th edition, Horstmann/Cornell, Prentice Hall Publishers. ISBN: 978-0135166307.

Resources: A flash drive to save programs is recommended.

Course Objectives: Upon completion of this course the student will be able to:

1. Write computer programs in the Java language which correctly apply principles of software engineering and object oriented design.
2. Demonstrate an understanding of principles of searching and sorting, as applied to computer programs in the Java language.
3. Demonstrate an understanding of common data structures, their performance characteristics, and applicability to programs written in the Java language.
4. Write Java programs of intermediate size and complexity that demonstrate the appropriate usage of data structures, searching and sorting techniques, object oriented principles, and software engineering principles
5. Read and interpret Java program code, and correctly predict output, given a specific input data set.

Course Outcomes and Competencies:

Intended Course Outcome: Students will be able to write object-oriented programs in the Java language which employ traditional data structures.

Course Competency: Students will be able to demonstrate the ability to design, code, and test a Java programming project which implements a traditional data structure, such as a stack, queue, tree, or linked-list.

Performance Measurement Instrument: Students will complete an assigned project which will be evaluated on a standardized rubric developed by IST faculty.

Attendance: Students are expected to regularly and punctually attend classes. Students are responsible for all material, assignments, and announcements, whether they are present or absent. Students who miss class should check D2L for missed assignments or activities and check-in with their instructor if they need help finding information on what was missed. Being absent from class will result in missing important material, concepts, information and assignments and the student must understand the impact this will have on grades.

Students are also expected to turn in all assignments by assigned deadlines, regardless of whether or not they have been present and attending classes. Failure to attend class is not an excuse for late work.

Withdrawal: Sometimes students may have life events or other situations that prohibit them from completing coursework or attending class. In events such as these, students should consider withdrawing themselves with a grade of "W" to avoid a grade of F. Withdrawals do not impact a student's Grade Point Average (GPA), but may impact a student's Financial Aid. Students are expected to monitor their class performance and grades to determine if a withdrawal is appropriate for their unique situation. To request a withdrawal, use your MTC email address to contact recordsoffice@midlandstech.edu and provide your name, student ID, course and section number.

No Shows: If you register for a course and decide not to attend for any reason, you must drop your course via Student Planning in MyMTC or by using a drop/add/withdrawal form from the Records Office. If you have any questions about the withdrawal process, please contact recordsoffice@midlandstech.edu.

You will not be automatically purged for non-attendance. If you do not officially drop the course, you will be responsible for course tuition and fees, which must be addressed through the College's Finance Office. The college's refund policy and dates are posted each semester on the college's [Tuition and Fees website](#).

Military Withdrawal: According to College Procedure 3.10.1, students having to withdraw from college because of Military Deployment (Military Reservists, National Guard, and active military personnel) while enrolled must complete a withdrawal form and submit to the Records Office along with a copy of military orders.

Disabilities Statement: At MTC, the Disability Services office operates within Counseling and Career Services. It is the student's responsibility to self-disclose as a student with a disability and to request accommodations through Disability Services. If a student requests accommodations for a disability through a faculty or staff member, they will be referred to Disability Services to complete the request. To request accommodations, please contact Disability Services in Counseling and Career Services on

Airport Campus (ASC 237, 822-3505) or Beltline Campus (BSC 239, 738-7636) or via email at disability@midlandstech.edu.

A student can also visit our website at <http://www.midlandstech.edu/student-resources/disability-services> for more information. If a student has a concern regarding the accessibility of education or information technologies, please contact the Chief Compliance Officer, Ian MacLean, at (803) 822-3204 or macleani@midlandstech.edu.

Online Technical Support: Technical questions related to D2L Brightspace, MyMTC, Zoom, or any other online college systems can be submitted via:

- Web: [Online Help Desk System](#)
 - Login: use your MTC e-mail username and password.
 - Student username example: georgeasmith
- Phone: (803) 738-7888
- Email: helpdesk@midlandstech.edu

A response will be provided within one business day.

D2L Brightspace Assistance: Dedicated technical support is also provided for questions specifically related to D2L Brightspace. Please leave a voicemail at (803) 822-3561, or email D2LHelp@midlandstech.edu. A response will be provided within one business day.

Student Honor Code: The students at Midlands Technical College have adopted the following Honor Code:

As a member of the Midlands Technical College community, I will adhere to the college's Student Code. I will act honorably, responsibly, and with academic integrity and honesty. I will be responsible for my own academic work and will neither give nor receive unauthorized or unacknowledged aid. I will behave courteously to all members of the MTC community and its guests and will respect college property and the property of others.

Academic Dishonesty: If a student is suspected of acts of academic misconduct, the instructor will inform the student of these allegations. The student will be provided the opportunity to explain or refute the allegation. If the faculty feels the charges are founded, the faculty member will refer the incident to the Director of Academic Integrity and Student Conduct. After the meeting, if the student is found to have engaged in academic misconduct, a letter will be sent to the student with any issued sanctions and options to appeal. More detailed information about Student Conduct, including Academic Misconduct, can be found in Appendix I in the [MTC Student Handbook](#).

Campus Emergency Protocol: To report safety concerns or suspicious activities, call Campus Security at 7850 (on campus) or (803) 738-7850 (cell phone or off campus). To report a security emergency, call Campus Security at (803) 738-7199 or dial local 911 immediately. It is recommended to add these numbers to your cell phone in case of an emergency. The college also provides emergency call boxes; look for these red call boxes in or near parking lots on all campuses. If a college-wide emergency occurs, the college will communicate additional information and instructions in a number of ways, including the MTC Information Centers, campus loud speakers, MyMTC Email, the MTC website, and MTC Alerts. To sign up for MTC Alerts! and receive emergency notifications on your cell phone, go to [MyMTC](#).

Student Handbook: Additional student guidelines, expectations, and a wealth of other information can be found in the [MTC Student Handbook](#). These topics include policies about children on campus, cell phones in the classroom, what to do in the case of inclement weather, and much more. Students are responsible for reading, reviewing, and understanding all topics covered in the Student Handbook.

Grading Scale:

90-100	A	Superior Work
80-89	B	Good Work
70-79	C	Average Work
60-69	D	Below Average Work
0	F	Unsatisfactory Work
	W	Withdrawal

Course Calendar: Please see the “Schedule of Activities” webpage in the D2L course within D2L.