Rowan College at Burlington County

Science, Technology, Engineering, and Mathematics Division

Course Code: CSE 210 - 100 **Course Title:** Machine & Assembly Language Programming

Prerequisites: CSE – 110 **Credits**: 3

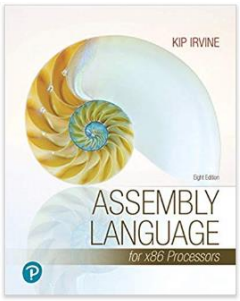
Location: DLC (online) **Lecture Time**: Mon/Wed 9:00 – 10:00 (recorded)

Instructor: Chris Simber **email:** csimber@rcbc.edu **Phone:** x 2090

Office: TEC – 211G **Office hours**: 2:00 – 3:00 by appointment
Schedule via email for Webex

SECTION 1:

Course Description: This course focuses on the organization of digital computers, buses, registers, processors, I/O, memory systems, and paged memory. It also covers instruction sets and execution, addressing modes, and Assembly Language programming, including subroutines, co-routines interrupts and traps.



ISBN-13: 978-0135381656
ISBN-10: 0135381657

Web-enhanced: This is an online course and will utilize Blackboard as a repository for course material, lectures and lecture material, assignments, and grades, as well as a vehicle for discussion.

Required Text: Assembly Language for x86 Processors, Eighth Edition,
Kip R. Irvine: ISBN-13: 9780135381656
e-text ISBN: 9780135381793

General Education Outcomes:

- Written and Oral Communication: Communication
  - Students will logically and persuasively support their points of view or findings
- Technology Competency or Information Literacy: Technology
  - Students will demonstrate the skills required to find, evaluate, and apply information to solve a problem.

Course Learning Outcomes: Upon completion of this course, students will be able to:

- Apply elementary programming skills in Assembly and Machine language
- Implement language-independent programming techniques in Assembly language
- Discuss computer operation at the CPU, register, and memory levels
- Discuss key hardware and machine/assembler terms and concepts

Core Course Content:

- Binary Numbers
- Addressing
- DOS programming environment
- Operands
- Executing programs
- Assembly language
- Operand types, Instruction set
- Logic and Control
- I/O – BIOS Calls
- Review Test, Coding Problems

SECTION 2:

Course and Classroom Policies:

Expectations: Students are expected to attend class (if face-to-face), and review RCBC email and the Blackboard course shell daily (attendance), read the assigned text chapter beforehand, complete and submit assignments on or before the due date, and to participate in discussions. Students are expected to conduct themselves in a professional manner in Discussion Forums.

Required email: Students are assigned an email account by the college (*firstname_lastname@mymail.rcbc.edu*). Students are expected to use this account to correspond with the instructor, submit assignments, and to include the course code in the subject line.

Criteria for Grade Determination:

Grading: Grades will be based on assignments and exams as noted below. Assignment questions and exercises are selected from the end-of-chapter Review Questions and Exercises, Algorithm Workbench, and Programming Exercises assignments in the text. Assignments submitted after the due date will incur a grade penalty. Makeup tests require a valid excuse and can result in loss of grade points. Class participation will be considered in the final grade.

Late assignments will incur a penalty of three (3) points per day. Assignments submitted more than one (1) week beyond the due date will not be accepted.

Assessment Methods:

Assignments (5% each)	50%
Exam #1	20%
Exam #2	15%
Exam #3	15%
Total	100%

Letter Grades

A = 90 - 100
B+ = 85 - 89
B = 80 - 84
C+ = 75 - 79
C = 70 - 74
D = 60 - 69
F = Below 60

CSE 210 Course Outline:

Week	Section(s) Covered	Topics
1-2	Chapters 1, 2	Introduction, Basics & Architecture
3	Chapters 3.1 – 3.5	Assembly Language Fundamentals
4	Chapter 4.1 – 4.5	Data transfer, Addition, Subtraction
		Data Ops, Addressing, branching
5	Section Review	**Exam #1 (Section 1)**
6	Chapter 5.1 – 5.4	Stacks, procedures, Libraries
7	Chapter 6.1 – 6.7	Boolean Expressions & Conditional Jumps
		Loops and Conditions
8	Chapter 7.1 - 7.3, 7.4	Integer arithmetic
9	Section Review	Exa**m #2 (Section 2)**
10	Chapter 8.1 – 8.3, 8.7	Advanced Procedures & Stack Frames
11	Chapter 12.1, 12.2	Floating Point Processing
12	Chapter 13	High-level Language Interface
13	Chapter 15.1 – 15.3	Disk Fundamentals
14	Section/Course Review	
		Exam #3 (Section 3)

* Course Outline is subject to change

SECTION 3:

College Policies: In order for students to know their rights and responsibilities, all students are expected to review and adhere to all regulations and policies as listed in the College Catalog and Handbook. The current college catalog and student handbook are important documents for understanding your rights and responsibilities as a student in the RCBC classroom. Please read your catalog and handbook as they supplement this syllabus, and can be accessed at rcbc.edu/publications. Important policies and regulations include, but are not limited, to the following:

- College Attendance Policy
- Grading Standards
  - Withdraw (W) and Incomplete Grades (I & X)
  - Withdrawal date for this semester – Academic Calendar
- Student Code of Conduct
  - Academic Dishonesty/Plagiarism and Civility

- Use of Communication and Information Technology

Academic Integrity Code

- ***Plagiarism*** – Plagiarism includes copying or paraphrasing another's words, ideas, or facts without crediting the source; submitting a paper written by someone else, either in whole or in part, as one's own work; or submitting work previously submitted for another course or instructor. Plagiarism on any assignment will result in failure for that assignment and may result in further disciplinary action, including but not limited to failure for the course. Please refer to the Student Handbook for additional information regarding plagiarism and College regulations.
- ***Texting, Cell phones, and Laptops*** – should be turned off in class or the ringer must be turned to silent. No texting is allowed in class during instruction time.
- ***Internet and Other Computer Use*** – all students are required to abide by established RCBC computer and Internet use procedures and regulations. Willful damage to or misuse of RCBC computers and/or software will be considered a violation of the RCBC Student Code of Conduct. Criminal prosecution may also result. This applies to IPODS, games or electronics of any kind, instant messenger, and social media.

Student Conduct Code - We shall abide by the expectations outlined in the Student Handbook (page 106-112). RCBC students are accountable according to the standards established in this policy. **http://www.rcbc.edu/PDFFiles/publications/1314Handbook.pdf**

Tutoring - RCBC offers free tutoring for all currently enrolled students. For more information regarding the Tutoring Center, please call extension 1495 at (609) 894-9311 or visit the Tutoring Center website at: **http://www.rcbc.edu/pages/218.asp**

Academic Advisement – RCBC provides Academic advising and free referral services to all students through the office of Academic Advising. For more information, visit the drop in center Laurel Hall. Call extension 7337 at (609) 894-9311 or (856) 222-9311 or visit the website at: ***http://www.rcbc.edu/pages/206.asp***

Library Resources – The RCBC Library provides access to the information resources you need to succeed in your studies, including books, journals and databases. Library Information Specialists provide support in finding and utilizing these resources. Library services are available at the Mount Laurel Student Success Center and online at **http://staff.rcbc.edu/library**. Online services include IM Chat, text, and phone support during regular hours and access to a wide variety of journals and databases 24/7/365 from both on and off campus. Library hours are posted in the libraries and on the library website.

Office of Student Support and Disability Services: RCBC welcomes students with disabilities into the college's educational programs. Access to accommodations and support services for students

with learning and other disabilities is facilitated by staff in the Office of Student Support (OSS). To receive accommodations, a student must contact the OSS, self-identify as having a disability, provide appropriate documentation, and participate in an intake appointment. If the documentation supports the request for reasonable accommodations, the OSS will provide the student with an Accommodation Plan to give to instructors. For additional information, please contact the Office of Student Support at 609-894-9311, ext. 1208, disabilityservices@rcbc.edu, or rcbc.edu/studentsupport.

Educational Technology Statement: Rowan College at Burlington County (RCBC) advocates the use of technology to enhance instruction. Students should assume that classroom and online technology will be used throughout their coursework at RCBC, as it will most certainly be used in their future education and careers. The College provides on-campus facilities for the convenience of the RCBC community. Various college departments, including the Office of Information Technology and the Office of Distance Education, provide technology training and assistance to faculty and students.

Student Success Services: RCBC offers a variety of free services for its students including those listed below. Descriptions of these services, as well as many others, can be found in the College Catalog and Handbook and on the RCBC website at rcbc.edu/publications.

- Career Services (rcbc.edu/careers)
- Educational Opportunity Fund (EOF) (rcbc.edu/eof)
- Financial Aid (rcbc.edu/financialaid)
- International Students Office (rcbc.edu/international)
- Office of Veteran Services (rcbc.edu/vets)
- Student Support Counseling (rcbc.edu/cpit)
- Test Center (rcbc.edu/testcenter)
- Transfer Services (rcbc.edu/transfer)