

# Cmsc 302 - Introduction To Discrete Structures

## Syllabus

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<b>Catalog listing:</b>	CMSC 302
<b>Course Level:</b>	Undergraduate
<b>Prerequisites:</b>	CMSC 255, grade C or higher
<b>Instructor:</b>	Prof. Vojislav Kecman, TAs: Paolo Cachi, Room E 2266
<b>Phone:</b>	804-827-4006, 804-827-3608
<b>Fax:</b>	804-828-2771
<b>email:</b>	<a href="mailto:vkecman@vcu.edu">vkecman@vcu.edu</a>
<b>Classroom &amp; Time:</b>	TR 12:30pm - 1:45pm
<b>Class website:</b>	Blackboard & <a href="http://www.people.vcu.edu/~vkecman/CMSC302.html">http://www.people.vcu.edu/~vkecman/CMSC302.html</a>
<b>Office Hours:</b>	TR 11.30am – 12.30pm

### 1.0 – Overview (Catalog Course Description):

CMSC 302. Introduction to Discrete Structures. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisites: CMSC 255 (or an equivalent course) with minimum grades of C. Combinatorial and sequential circuits, algorithms and algorithm analysis, recursion, recurrence relations, graphs, trees.

### 2.0 – Course Structure:

Lecture hours/week – 3

Lab hours/week – 0

### 3.0 – Course Goals

Upon successful completion of this course, the student will be equipped with:

*Theory and Development:* Graduates will demonstrate the ability to use theoretical knowledge and skills to design and implement software solutions to problems. *This course provides the background for the theoretical knowledge* including the recap of basics discrete algebra, combinatorics and discrete probability, relations, recursion, recurrence relations, graphs, trees,...

*Life-Long Learning:* Graduates will have a solid understanding of the concepts used in computer science. This understanding will provide them with the foundation necessary to be able to pursue further learning, whether as graduate students or on their own.

*Class Participation:* To be successful in this particular course a regular class attendance is more than necessary. 40% of final grade is coming from not announced in advance quizzes' grades.

### 4.0 – ABET Criteria Addressed:

- a. An ability to apply knowledge of computing and mathematics appropriate to the program's student outcomes and to the discipline
- b. An ability to use current techniques, skills, and tools necessary for computing practice.

### 5.0 – Major Topics Covered:

- Logic, Set theory, Functions, Sequences, Summations, Relations, Graphs, Trees, Induction & Recursion, Advanced Counting Techniques – Recurrences, Algebra & Matrices

### 6.0 – Textbook(s):

**Discrete Mathematics and its Applications, Eds 5, 6, 7, 8, by Kenneth H. Rosen**

## 7.0 – Class Schedule:

- Lecture: 3, Bldg. Engineering - West Hall, Room W 101

## 8.0 – Evaluation:

**Quizzes & MIDTERM (60 % total)**

**FINAL (40 % total)**

## Grading scale:

**A: 90+ B: 75-89 C: 60-74 D: 50-59 F: < 50**

Students should visit <http://go.vcu.edu/syllabus> and review all syllabus statement information. The full university syllabus statement includes information on safety, registration, the VCU Honor Code, student conduct, withdrawal and more. Details only are below:

### VCU Statement on Safety

What to know and do to be prepared for emergencies at VCU:

- Sign up to receive VCU text messaging alerts ([www.vcu.edu/alert/notify](http://www.vcu.edu/alert/notify)). Keep your information up-to-date.
- Know the safe evacuation route from each of your classrooms. Emergency routes are posted in classrooms.
- Listen for and follow instructions from VCU or other designated authorities.
- Know where to go for additional emergency information ([www.vcu.edu/alert](http://www.vcu.edu/alert)).
- Know the emergency phone number for the VCU Police (828-1234). Report suspicious activities and objects.

### VCU Honor System

Virginia Commonwealth University recognizes that honesty, truth, and integrity are values central to its mission as an institution of higher education. The Honor System is built on the idea that a person's honor is his/her most cherished attribute. A foundation of honor is essential to a community devoted to learning. Within this community, respect and harmony must coexist. The Honor System is the policy of VCU that defines the highest standards of conduct in academic affairs.

The Honor System states that faculty members are responsible for:

- Understanding the procedures whereby faculty handles suspected instances of academic dishonesty. Faculty are to report any infraction of the VCU Honor System according to the procedures outlined in our policy.
- Developing an instructional environment that reflects a commitment to maintaining and enforcing academic integrity. Faculty should discuss the VCU Honor System at the onset of each course and mention it in course syllabi.
- Handling every suspected or admitted instance of violation of the provisions of this policy in accordance with procedures set forth in the policy.

The Honor System can be reviewed on the Web at <http://www.students.vcu.edu/studentconduct/>

The Honor System must be upheld and enforced by each member of the Virginia Commonwealth University community. The fundamental attributes of our community are honor and integrity. We are privileged to operate with this Honor System.

### Statement on Americans with Disabilities Act

Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 require Virginia Commonwealth University to provide an 'academic adjustment' and/or a 'reasonable accommodation' to any qualified individual with a physical or mental disability who self-identifies as having such. Students should contact the Disability Support Services office on the Monroe Park Campus (828-2253) or on the MCV Campus (828-9782) for appropriate academic adjustments or accommodations.

### VCU Guidelines for Student Conduct

VCU faculty play a critical role in helping to build an environment that is conducive to the academic success of our students. As you know, VCU has policies and procedures designed to create an environment conducive to academic excellence. One of these policies and procedures can be found in a document entitled "Guidelines for Faculty Members Regarding Student Conduct in the Instructional Settings." This document is available on the VCU Web at <http://www.students.vcu.edu/studentconduct>.

Understanding these guidelines will help you to encourage classroom behavior that does not detract from the quality of each student's educational experience. Please read the document and think about your role in promoting a University culture based on mutual respect and civility. As a reminder, both faculty and students should turn off cell phones and pagers while in the classroom.

### Religious Observances:

It is the policy of VCU to accord students, on an individual basis, the opportunity to observe their traditional religious holidays. Students desiring to observe a religious holiday of special importance must provide advance written notification to each instructor by the end of the second week of classes. Instructors are encouraged to avoid scheduling on these dates one-time-only activities that cannot be replicated. Faculty members are expected to make reasonable accommodations to students who are absent because of religious observance through such strategies as providing alternative assignments or examinations or granting permission for audio or video recordings and the like.

### Important Dates:

Important dates for the Spring 2019 semester are available at:

[http://academiccalendars.vcu.edu/ac\\_fullViewAll.asp?term=Spring+2019](http://academiccalendars.vcu.edu/ac_fullViewAll.asp?term=Spring+2019)