MATHEMATICS 469: Combinatorics I (Section 1001)  
Fall 2014 Semester  
8:30 – 9:45 p. m. Tuesday & Thursday  CBC C116

Instructor:  Dr. Robinette  
Office:  CDC 920 (Central Desert Complex building 9, room 920)  
Office Hours:  10:30 – 1:00 Monday  
Office Phone:  (702)895–0363  
E-mail Address:  robinet3@unlv.nevada.edu


Learning Objectives:  
1. Understand and be able to apply the general counting methods for permutations and combinations;  
2. Recognize and apply inclusion-exclusion principle;  
3. Understand and apply generating functions;  
4. Solve recurrence relations;  
5. Formulate graph models to solve problems using covering circuits and graph colorings;  
6. Apply various search methods using trees;  
7. Use permutation and symmetry groups for counting problems applying Burnside’s Theorem and Pólya’s counting formula

Notes:  
Note sheets are available from my website  
[http://faculty.unlv.edu/robinette/robinette.html](http://faculty.unlv.edu/robinette/robinette.html)  
Print your own copy before you come to class. We fill these out together in class. If you miss class, then you are expected to get the notes from one of your classmates. I will not provide notes for days you are absent.

Exams:  
There will be three 75-minute exams, worth 100 points each. The dates of these exams are September 23, October 21, and November 25.

Homework:  
Regular assignments will be made. You are to work all problems. A subset of these will be collected and graded each week (on Thursday you will be given the problems that are due to hand in for grading on the next Tuesday). Homework assignments are due at the beginning of class and late homework earns the score of zero. Your homework score will be scaled to 100 points at the end of the semester (for example, if there were 12 homework assignments, worth 10 points each, and you earn 100 out of the possible 120 points available, then your homework score for your final grade would be  
\[(100/120) \cdot 100 = 83.3.\]

Final Exam:  
The final exam, worth 100 points, will be given on  
*Thursday, December 11, 2014 from 8:00 – 10:00 a. m.*

Grading:  
There are 500 points available in this course coming from your final exam score, your three exam scores, and your homework score. Final grades for the course are based on the following percentage scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>[90, 100]</td>
</tr>
<tr>
<td>B+</td>
<td>[84, 90]</td>
</tr>
<tr>
<td>B</td>
<td>[78, 84]</td>
</tr>
<tr>
<td>C+</td>
<td>[72, 78]</td>
</tr>
<tr>
<td>C</td>
<td>[66, 72]</td>
</tr>
<tr>
<td>D+</td>
<td>[60, 66]</td>
</tr>
<tr>
<td>D</td>
<td>[50, 60]</td>
</tr>
<tr>
<td>F</td>
<td>[0, 50]</td>
</tr>
</tbody>
</table>

Grades of A–, B–, C–, and D– may be given in borderline cases, where class attendance and class participation will be determining factors.

Attendance:  
You are expected to attend class regularly.  *You are responsible for all the material presented and all announcements made on days you are absent.*
Additional Miscellaneous Policies

**Academic Misconduct** – Academic integrity is a legitimate concern for every member of the campus community; all share in upholding the fundamental values of honesty, trust, respect, fairness, responsibility and professionalism. By choosing to join the UNLV community, students accept the expectations of the Student Academic Misconduct Policy and are encouraged when faced with choices to always take the ethical path. Students enrolling in UNLV assume the obligation to conduct themselves in a manner compatible with UNLV’s function as an educational institution.

An example of academic misconduct is plagiarism. Plagiarism is using the words or ideas of another, from the Internet or any source, without proper citation of the sources. See the [Student Academic Misconduct Policy](http://studentconduct.unlv.edu/misconduct/policy.html) approved December 9, 2005 located at.

**Copyright** – The University requires all members of the University Community to familiarize themselves with and to follow copyright and fair use requirements. You are individually and solely responsible for violations of copyright and fair use laws. The university will neither protect nor defend you nor assume any responsibility for employee or student violations of fair use laws. Violations of copyright laws could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. Additional information can be found at: [http://www.unlv.edu/provost/copyright](http://www.unlv.edu/provost/copyright).

**Disability Resource Center (DRC)** – The UNLV Disability Resource Center (SSC-A 143, [http://drc.unlv.edu](http://drc.unlv.edu), 702-895-0866) provides resources for students with disabilities. If you feel that you have a disability, please make an appointment with a Disabilities Specialist at the DRC to discuss what options may be available to you.

If you are registered with the UNLV Disability Resource Center, bring your Academic Accommodation Plan from the DRC to me during office hours so that we may work together to develop strategies for implementing the accommodations to meet both your needs and the requirements of the course. Any information you provide is private and will be treated as such. To maintain the confidentiality of your request, please do not approach me before or after class to discuss your accommodation needs.

**Religious Holidays Policy** – Any student missing class quizzes, examinations, or any other class or lab work because of observance of religious holidays shall be given an opportunity during that semester to make up missed work. The make-up will apply to the religious holiday absence only. It shall be the responsibility of the student to notify the instructor no later than the end of the first two weeks of classes, September 5, 2014, of his or her intention to participate in religious holidays which do not fall on state holidays or periods of class recess. For additional information, please visit: [http://catalog.unlv.edu/content.php?catoid=6&navoid=531](http://catalog.unlv.edu/content.php?catoid=6&navoid=531).

**Incomplete Grades** - The grade of I – Incomplete – can be granted when a student has satisfactorily completed three-fourths of course work for that semester/session but for reason(s) beyond the student’s control, and acceptable to the instructor, cannot complete the last part of the course, and the instructor believes that the student can finish the course without repeating it. The incomplete work must be made up before the end of the following regular semester. If course requirements are not completed within the time indicated, a grade of F will be recorded and the GPA will be adjusted accordingly. Students who are fulfilling an Incomplete do not register for the course but make individual arrangements with the instructor who assigned the I grade.

**Tutoring** – The Academic Success Center (ASC) provides tutoring and academic assistance for all UNLV students taking UNLV courses. Students are encouraged to stop by the ASC to learn more about subjects offered, tutoring times and other academic resources. The ASC is located across from the Student Services Complex (SSC). Students may learn more about tutoring services by calling 702-895-3177 or visiting the tutoring web site at: [http://academicsuccess.unlv.edu/tutoring/](http://academicsuccess.unlv.edu/tutoring/).

**UNLV Writing Center** – One-on-one or small group assistance with writing is available free of charge to UNLV students at the Writing Center, located in CDC-3-301. Although walk-in consultations are sometimes available, students with appointments will receive priority assistance. Appointments may be made in person or by calling 702-895-3808. The student’s Rebel ID Card, a copy of the assignment (if possible), and two copies of any writing to be reviewed are requested for the consultation. More information can be found at: [http://writingcenter.unlv.edu/](http://writingcenter.unlv.edu/)

**Rebelmail** – By policy, faculty and staff should e-mail students’ Rebelmail accounts only. Rebelmail is UNLV’s official e-mail system for students. It is one of the primary ways students receive official university communication such as information about deadlines, major campus events, and announcements. All UNLV students receive a Rebelmail account after they have been admitted to the university. Students’ e-mail prefixes are listed on class rosters. The suffix is always @unlv.nevada.edu. Emailing within WebCampus is acceptable.

**Final Examinations** – The University requires that final exams given at the end of a course occur at the time and on the day specified in the final exam schedule. See the schedule at: [http://www.unlv.edu/registrar/calendars](http://www.unlv.edu/registrar/calendars).