The course introduces basic hydrological processes such as precipitation and abstractions. It also covers engineering applications such as statistical hydrology, regional frequency analysis, water balance methods, the unit hydrograph and rainfall-runoff processes, flow routing techniques, and urban hydrology.

Prerequisites: SC/MATH 2930 3.00; LE/CIVL 2210 4.00.

### Instructor(s)

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<tr>
<th>Name</th>
<th>Section / Format / Term</th>
<th>Contact Email</th>
<th>Contact Phone</th>
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<tbody>
<tr>
<td>Khan, Usman T.</td>
<td>Sec. M / LECT / W</td>
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### Additional Information

**Textbook**

No required textbook. However, the following texts have been reserved at the Steacie Science and Engineering Library:


**Course Learning Outcomes**

Upon the completion of this course, students are expected to learn and retain the following concepts and skills:

1. Understand the different hydrologic and streamflow processes and factors that control them
2. Identify different techniques for measuring hydrologic quantities
3. Apply water budget techniques at the watershed scale
4. Understand the concept of a unit hydrograph and use it for rainfall-runoff analysis
5. Use statistical methods to determine hydrological quantities and for regional frequency analysis
6. Apply flow routing techniques to solve engineering problems

**Tutorials**

Six 2 hour tutorials are scheduled for CIVL 3220. The date for each tutorial will be posted on Moodle. The tutorials will be used for students to work on course-related tasks. Furthermore, in the event that a regularly scheduled lecture is cancelled tutorial time slots may be used.

**Examinations**

There will be three term tests (scheduled for 5 February, 12 March, and 26 March, 2019) which will be held during the tutorial sessions, and one final examination at the end of the winter term. The date, time, and location of the final exam will be announced through the course’s Moodle site. Any permitted materials will be announced prior to the exam date.

**Classroom Participation**

...
A component of your grade is assigned to classroom participation. This will include the completion of in-class mini-assignments during lectures.

**Online Lecture Notes & e-Learning Contents**

This is a blended course with a portion of course contents to be delivered in the form of e-Learning. Lecture materials and e-Learning contents will be posted on the CIVL 3220 Hydrology site within Moodle. Students have to visit this page as often as possible for latest updates. Minimum technical skills are expected of the student in order to access the e-Learning materials. Students should contact the instructors for any difficulty experienced in accessing the recommended e-Learning materials.

**Evaluation Scheme**

- In-class quizzes - 5%
- Term test 1: Statistical Hydrology - 20%
- Term test 2: Streamflow, precipitation & abstractions - 20%
- Term test 3: Hydrological cycle & rainfall-runoff processes - 20%
- Final examination: cumulative - 35%

**ACADEMIC INTEGRITY LINKS**

- Senate Policy on Academic Honesty - http://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/
- Academic Integrity - http://lassonde.yorku.ca/academic-integrity

**STUDENT LINKS**

- Student Rights and Responsibilities - http://oscr.students.uit.yorku.ca/student-conduct
- Religious Observance - https://w2prod.sis.yorku.ca/Apps/WebObjects/cdm.woa/wa/regobs
- Student Accessibility Services (SAS) - https://accessibility.students.yorku.ca/
- York University’s Policies on Gender/LGBTQ*/Positive Space - http://rights.info.yorku.ca/lgbtq/

**LAND ACKNOWLEDGEMENT**

- We acknowledge our presence on the traditional territory of many Indigenous Nations. The area known as Tkaronto has been care taken by the Anishinabek Nation, the Haudenosaunee Confederacy, the Huron-Wendat, and the Métis. It is now home to many Indigenous Peoples. We acknowledge the current treaty holders, the Mississaugas of the New Credit First Nation. This territory is subject of the Dish With One Spoon Wampum Belt Covenant, an agreement to peaceably share and care for the Great Lakes region.
- The Indigenous Framework for York University: A Guide to Action can be found here: http://indigenous.info.yorku.ca/
- Meaning of a land acknowledgement: http://healthydebate.ca/opinions/indigenous-land-acknowledgements

Many courses utilize Moodle, York University's course website system. If your course is using Moodle, click here to access it.

**Moodle @ York University**