Purpose: To describe in detail the fundamental aspects of transcriptional regulation in the context of stem cell biology. The Course has been divided into 6 distinct sections which introduce new emerging concepts in stem cell biology related to transcriptional regulation and clinical applications.

Part 1: Conservation of mechanisms for gene regulation
Part 2: Transcription factors and mammalian development
Part 4: Current concepts of gene regulation at different levels: miRNA and Epigenetics
Part 5: Perturbation of normal gene expression in cancer
Part 6: Clinical applications of human stem cells: Disease Modeling, Cell Replacement, Gene Therapy, Drug Discovery, and Aging

Evaluation of student performance will be based on two midterm tests and a final examination. The final grade will be calculated as follows: test 1, 25%; test 2, 25%; final examination, 50%. No make-up tests will be offered. If you miss a test, you must receive an exemption from the Dean of your program. Otherwise, the mark for the missed test will be zero (0). Grades for the test will be posted on LearnLink via the last five digits of the student number. By attending class, the student is agreeing to this method of grade disclosure.

Percentage grade will be converted to a final letter (see Table below).

<table>
<thead>
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<th>%</th>
<th>Letter</th>
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</thead>
<tbody>
<tr>
<td>100 - 90</td>
<td>A+</td>
<td>79 – 77</td>
<td>B+</td>
<td>69 – 67</td>
<td>C+</td>
<td>59 – 57</td>
<td>D+</td>
<td>49 – 0</td>
<td>F</td>
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<tr>
<td>89 – 85</td>
<td>A</td>
<td>76 – 73</td>
<td>B</td>
<td>66 – 63</td>
<td>C</td>
<td>56 – 53</td>
<td>D</td>
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<tr>
<td>84 – 80</td>
<td>A-</td>
<td>72 – 70</td>
<td>B-</td>
<td>62 – 60</td>
<td>C-</td>
<td>52 – 50</td>
<td>D-</td>
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</tbody>
</table>

All percentage grades within 0.5% of the next letter grade will be reviewed.

Questions: Students are encouraged to ask questions in class and at scheduled Tutorials (see Schedule).

Textbook: Optional: Molecular Biology, Weaver, published by McGraw Hill

Lecture notes: http://www.learnlink.mcmaster.ca
Academic ethics: Students are asked to reread two documents provided on registration; the Senate Statement on Academic Ethics, and the Senate Resolutions on Academic Dishonesty. Students should be sure that they understand the expectations the University has of its scholars, and the possible consequences when these expectations are not met.

Academic dishonesty consists of misrepresentation by deception or by other fraudulent means and can result in serious consequences, eg. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: “Grade of F assigned for academic dishonesty”), and/or suspension or expulsion from the University. It is your responsibility to understand what constitutes academic dishonesty. For information on the various kinds of academic dishonesty, please refer to the Academic Integrity Policy, specifically Appendix 3, located at: http://www.mcmaster.ca/univsec/policy/AcademicIntegrity.pdf

The instructors and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email and course websites weekly during the term and to note any changes.