LECTURES: M-F, 8:00 - 10:20, Thorv 110. LAB: M-F, 10:30 - 11:20, Thorv 110.

INSTRUCTOR: Pawel Gladki.

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OFFICE HOURS: If you want to see your instructor in his office, please make an appointment: see him before or after class, call his office or send him an e-mail.

TEXTBOOK: James Stewart, Single variable calculus: early transcendentals, 5th Edition, Thomson Learning, Belmont 2003. Other editions of this book are suitable, but page and section references in this information sheet and homework problems are taken from the 5th edition.

LECTURES AND LABS: The M-F 8:00 - 10:20 period will be devoted to lectures on new material. There will be a 10 minutes long break in the middle of each lecture. The lab periods will be devoted to exercises and problems illustrating the new material. Homework will be also discussed. The lab is an essential part of this class.

EVALUATION: 11 assignments, counting for a total of 10% of your mark, 2 mid-term tests, each counting for 20% of your mark for a total of 40% and final examination counting for 50% of your mark.

EXAMINATIONS: Mid-term exams will be held during the lecture periods on **June 18** and **June 24**. Durations of each mid-term test will be 90 minutes. Final examination will take place on **Wednesday**, **June 30th at 9:00 a.m.** All exeminations will be closed book: no calculators, notes or formula sheets will be permitted. There will be no make up exams. Students who miss either one of the mid-term exams for legitimate reasons will have the value of that examination transferred to the final examination thereby increasing the value of the final examination accordingly.

HOMEWORK: Problems from each section of the text are attached to this course outline. There are two kinds of problems: **suggested exercises** and **assignments**. Suggested problems will not be handed in or graded, but it is strongly advised to solve all of them before you start working on assignments - in order to get familiar with new definitions, theorems and examples. Assignments are to be completed and handed in for grading - there are 11 short assignments, approximately each for one lecture (see course calendar). They will be returned in the following lecture. The list of problems to be discussed during labs and the list of topics to be covered during lectures are also enclosed. It is suggested that you have a look to the textbook before each class and skim the material to be instructed (see course calendar).

MATH HELP CENTRE: There is a Math Help Centre in room 15 McLean Hall. Its hours of operation will be posted on the web page: http://math.usask.ca/math-help.

COURSE CALENDAR:

June 10:: Appendix E, Sigma Notation, pp. A34-A39, §5.1, Areas and Distances, pp. 369-380.
Lab problems: Appendix E: 1, 5, 11, 15, 21, 25, §5.1: 11, 16, 26.
Suggested problems: Appendix E: 3, 7, 13, 17, 23, 27, §5.1: 1, 15.
Assignment: Appendix E: 18, 28, §5.1: 22 - due June 11.

June 11:: §5.2 The Definite Integral, pp. 380-394, §5.3, The Fundamental Theorem of Calculus, pp. 394-405. Lab problems: §5.2: 17, 33, 21, §5.3: 19, 20. Suggested problems: §5.2: 19, 23, §5.3: 21, 25, 29. Assignment: §5.2: 22, §5.3: 26, 30 - due June 14.

June 14:: §5.4 Indefinite Integrals and the Net Change Theorem, pp. 405-414, §5.5, The Substitution Rule, pp. 414-422.
Lab problems: §5.4: 1, 3, 5, 7, 17, 19, §5.5: 1, 3, 7, 19, 43.
Suggested problems: §5.4: 2, 9, 11, 13, 21, 23, §5.5: 5, 11, 13, 27, 29.
Assignment: §5.4: 10, 24, §5.5: 22, 38 - due June 15.

June 15:: §5.6 The Logarithm Defined as an Integral, pp. 422-429, §6.1, Areas Between Curves, pp. 437-444.
Lab problems: Review: 9, 11, 19, 21 §6.1: 5, 7.
Suggested problems: Review: 13, 15, 27, 29, §6.1: 9, 11.
Assignment: Review: 16, 30, §6.1: 20 - due June 16.

June 16:: §6.2 Volumes, pp. 444-455,
§6.3, Volumes by Cylindrical Shells, pp. 455-460.
Lab problems: §6.2: 1, 3, 11, 55, §6.3: 3, 15.

Suggested problems: §6.2: 3, 13, §6.3: 7, 9, 17. Assignment: §6.2: 12, 68, §6.3: 42, - due June 17.

June 17:: §6.4 Work, pp. 460-464,
§6.5, Average Value of a Function, pp. 464-467.
Lab problems: §6.4: 13, 15, §6.5: 1, 3, 20.
Suggested problems: §6.4: 17, 19, 21, 23, §6.5: 5, 7.
Assignment: §6.4: 20, 24 §6.5: 22, - due June 21.
You are also encouraged to solve some problems from Review and Problems Plus sections in order to prepare for the test.

June 18:: Mid-term Test I. Comments and solutions of examination's problems. Lab problems: Review: 5, 11, 17, 21, 23, 29.

June 21:: §7.1 Integration by Parts, pp. 475-482, §7.2, Trigonometric Integrals, pp. 482-489. Lab problems: §7.1: 3, 5, 7, 19, 21, 23, §7.2: 3, 13, 27, 29. Suggested problems: §7.1: 9, 11, 25, 27, §7.2: 1, 17, 26, 28. Assignment: §7.1: 6, 16, 26, §7.2: 2, 14, 30 - due June 22.

June 22:: §7.3 Trigonometric Substitution, pp. 489-496,
§7.4, Integration of Rational Functions by Partial Fractions, pp. 496-505.
Lab problems: §7.3: 4, 9, 5, 23, §7.4: 17, 19, 29, 36.
Suggested problems: §7.3: 7, 6, 13, 25, §7.4: 9, 21, 31, 37.
Assignment: §7.3: 15, 10, 8, §7.4: 10, 22, 32, 38 - due June 23.

 June 23:: §7.5 Strategy for Integration, pp. 505-511, §7.7, Approximate Integration, pp. 518-530.
 Lab problems: §7.5: 1, 21, 41, 61, 79, §7.7: 7, 9, 11.
 Suggested problems: §7.5: 11, 31, 51, 71, 81, §7.7: 13, 15, 17.
 Assignment: §7.5: 12, 22, 32, 52, 72, §7.7: 16 - due June 25. You are also encouraged to solve some problems from Review and Problems Plus sections in order to prepare for the test.

June 24:: Mid-term Test II. Comments and solutions of examination's problems. Lab problems: Review: 1, 7, 14, 21, 28, 35.

June 25:: §2.4 The Precise Definition of a Limit, pp. 114-124, §2.5, Continuity, pp. 124-135. Lab problems: §2.4: 19, 21, 23, §2.5: 13, 15, 17. Suggested problems: §2.4: 25, 27, §2.5: 19, 20. Assignment: §2.4: 28, §2.5: 14, 43 a) - due June 28.

June 28:: §4.4 Indeterminate Forms and de l'Hospital Rule, pp. 307-316,
§7.8, Improper Integrals, pp. 530-540.
Lab problems: §4.4: 5, 15, 25, 35, 45, 55, §7.8: 5, 12, 19, 26, 33.
Suggested problems: §4.4: 11, 21, 31, 41, 51, 61, §7.8: 7, 15, 23, 29, 35.
Assignment: §4.4: 42, 62, §7.8: 40 - due June 29.

June 29:: §8.1 Arc Length, pp. 547-554,
§8.2, Area of a Surface of Revolution, pp. 554-561.
Lab problems: §8.1: 5, 9, 13, §8.2: 5, 9, 17.
Suggested problems: §8.1: 7, 11, 15, §8.2: 7, 11, 19.

June 30:: Final examination.