

(FRQRPLFV  
2IILFH 5RRP

3URIHVVRU 'RQDOO  
ZDOGPDQ#FRORU

&RXUVH ,QIRUPDWLRQ

:HOFRPH WR (FRQ 7KLV LV DGI LUW DWELR XULFN LZL S UKRDE  
LQWURGXFWRQ WR HFRQRPHWULWR SL\$S OQ FDFWLRQ RCPM FZV C

3UHUHTXLVLWHV

7KH PRVW LPSRUWDQW ELDFWRU WRKLOV FWRUWK LQNDIE EOWUD  
DGGLWLRQ VWXGHQWV ZLOO ILQHGUMW HDGILQJ RILD OVKHEU  
OHYHO RI KLJK VFKRRO \$OJHEUDXQ,XVGSDBUHQWPLDDOOHQGU  
WKLW FRXUVH EXW WKH\ ZLOO EHXULHQG W&DIOFRXOUKWHZLOO

7KH FRXUVH SUHUHTXLVLWHV DUH RI WKH IROORZLQJ  
( & 21 DQG  
0\$7+  
0\$7+  
0\$7+  
0\$7+ DQG  
\$330

,I \RX KDYH QRW WDNHQ RQH RI WKHVHZLOVKRWHW D\ZDLFDH

,Q WKH ILUVW ZHHN RI FODVV

‡ 3OHDVH UH DG &DQLJOLD WKH FRXUVH WH[WERRN &K  
‡ ,I \RX DUH QRW DOUHDG\ FRPIRLWREOMH ZLWK8QLFYUFW  
D VLWH OLFHQVH WR WKH 06 211LHHSDFWDLVH RVRHQXLQ  
LQ :LQGRZV 3&V DQG VRPH ODFV DQGLWQLWKHYBODEO  
FRPSXWHU ODEV ,I \RX ZDQW KHFRSPS&WMDOORQRLW R  
EXJEXVWHUV RU VHH

*<http://www.colorado.edu/oit/services/messaging-collaboration/microsoft-office-365/help/proplus>*

&RXUVH 2EMHFWLYHV

‡ 6WDWLWVWLFV LV WKH VWXG\ RVLFDWDRUWRXFDWQZR  
WKDW LV VEMHFW WR UDQGRPQHVM LVKWRPDMQYHRMKNHF  
ODQJXDJH PDWKHPDWLFDO V\PERVDFWRROV DQG WHFK

‡ 6WDWLWVWLFV LV WKH EXLOGLQH DSSOLFNBWHRRQRIPHV  
VWDWLWVWLFV WR HFRQRPLF PRGHGXLQGLGDWRD SURLYHGRIC  
LQWURGXFWRQ WR HFRQRPHWULFV

‡ 6LQFH WKH DSSOLHG HFRQRPLKW FRXUVHGDLDWDW D \$UKR  
WKH DELOLW\ WR RUJDQLJH DQG EOHVWLJDWH GDWD XV

/HFWXUHV 5HFLWDWLRQ :RUN /RDG

7KHUH ZLOO EH WZR OHFWXUHV ZHHNORP PHHWLRQJ 7XHVG  
S P LQ %(6& %HQVRQ (DUWK 6FLHQFHV URRP

,Q OHFWXUH , ZLOO FRYHU PRVW VEXWKHWHQV ERRWKHX  
DGGLWLRQ VRPH WRSLFV WKDWHDW RQRUHQHDDWHIGV WKH  
UHDGLQJ WKH WH[W EXW LW LV XERWHGM DLW D WODHS SORHV  
HFRQRPLFV PFK EHWWHU E\ DWZHOGLQJOSHFVXUHQDV,Q  
E\ EHLQJ SDUW RI WKHWRXSGXNDLQJRTXUHQJ ER ZRUNL  
LQ OHFWXUH H[HUFLVHV DQG LQ RWKHU ZD\

,Q DGGLWLRQ WR WKH OHFWXUH WRN VRORZGLQH UHFLWD

1XPEHU	'D\	7LPH	5RRP
7		2	+801
7		2	+106
7+		2	+801
7+		2	+801

,Q UHFLWDWLRQ PDWHULDO ZLOVEDHQSUSVREOHFH UHWHY  
DGGLWLRQ ([FHO SURJUDPPLQJ DQWLRQLW ZLOQCEMHGU  
RI WKH FRXUVH 7KHUH DUH PRUHLWVQRQ VWXGHQWV  
WR OHDUQ RQH RQ RQH 6LQFH KRZ ERORUHHFRPSDURXUV  
XVXDO WKUHH FUHGLW FRXUVH UHFLWDWLRQ DWWHQGDC

7R SDVV WKLW FRXUVH \RX PXVW DWWHQG DW OHDVV

,Q P\ H[SHULHQFH IRU D VWXGHQW ZKWK DYHUDJH P  
DGGLWLRQDO *Realtime* WR WZR KRXUV QGZRONERXW TXLU  
DVVLJQPHQWV LQ RUGHU WR IXOOLXQSRXUVWHQW DWKWHVFR  
IDLUO\ EDVLF FRQFHSWV EXW GRQWFRSHWXDWLDVBLVOHD  
PDWKHPDWLFDO ULJRU LQFUHDVH DV WKH VPHVWHU SUR

&RXUVH 2XWOLQH

7KH FRXUVH *Probability* V ZLWK *statistics* FRQLQXHV ZLWK  
*econometrics* DOO WHUPV WR EH GHILQH

7KH IROORZLQJ LV D OLVW RI VHWKURHQVFRONFRYKFLWHGLU  
EH XVHIXO WR \RXUWRLQHWKZKWHKZKUDLVWDXKDWVHFVFR  
SUHYLRXVO\ EXW , H[SHFW LW ZLXOXDWYKQVSRQWPHDC

Section 1

- ‡ 5HVHDFK LQ <sup>3</sup>+DUG´ DQG <sup>3</sup>6RIW VFLHQFHV
- ‡ 6XPPDWLRQ QRWDWLRQ
- ‡ ,QWURGXFWRQ WR SUREDELOLW\ \$[LRPV 9HQQ GLD.
- ‡ \$GGLWLRQ DQG FRPSOHPHQW UXOHV RI SUREDELOLW\
- ‡ &RQGLWLRQDO SUREDELOLW\
- ‡ 7UHH GLDJUDPV
- ‡ ,QGHSHQQGHQFH DQG PXWXDO H[FOXVLYLW\
- ‡ %D\HV ODZ
- ‡ 8UQ SUREOHPV
- ‡ %D\HV /DZ IRU SDUWLWLRQV

Section 2

- ‡ 5DQGRP YDULDEOHV DQG SUREDELOLW\ GLVWULEXWLRQ

‡ 'LVFUHWH UDQGRP YDULDEOHV WKH SUREDELOLW\ PD  
‡ %HUQRXOOL ELQRPLDO DQG 3RLVVRQ UDQGRP YDULD  
‡ 0DWKHPDWLFDQ H[SHFWDWLRQ  
‡ ([SHFWDWLRQ RI D IXQFWLRQ RI UDQGRP YDULDEOHV  
‡ &RQWLQXXV UDQGRP YDULDEOHV WKH SUREDELOLW\  
‡ 7KH SRZHU H[SRQHQLDO DQG VWDQGDUG QRUPDO G  
‡ %LYDULDWH PDUJLQDO DQG FRQGLWLRQDO GLVWULE  
‡ &RQGLWLRQDO H[SHFWDWLRQ DQG YDULDQFH  
‡ &RYDULDQFH DQG FRUHHODWLRQ

*Section 3*

‡ 7KH JHQHUDO QRUPDO GLVWULEXWLRQ  
‡ )URP SUREDELOLW\ WR VWDWLWLFV SRSXODWLRQ D  
‡ 6DPSOLQJ WKHRU\ WKH GLVWULEXWLRQ RI WKH VDPS  
‡ 7KH &HQWUDO /LPLW 7KRUHP  
‡ 7KH FKL VTXDUHG GLVWULEXWLRQ  
‡ 3RLQW HVWLPDWLRQ  
‡ 8QELDVHGQHVV DV D SURSHUW\ RI DQ HVWLPDWRU

6LQFH WKHUH LV QR GLVN RU NHV RFR DXQ OG FZL WKS WKO VVK  
VLQFH WKHUH LV RQO\ RQH HGLWDRQ ZDR SXVHGKFRVSHLW  
EHHQ XVHG IRU W\BGRXPHOH DRW&BZIE TO DVVWHYME DV\$

7KH\ ZLOO EH FRPSRVHG RI TXHVWLRQV RI WKLW HDW HZ[HO  
DGGLWLRQDO TXHVWLRQV

‡ 7KH ILQDO H[DP LV FXPXODWLYH WR EH JL\$HQ RQ 7X  
\$GGLWLRQDO QRWHV RQ WKH SUREOHP VHVV

‡ <RX PXVW DQVZHU DOO H[HUFLVHV EXW QRW DOO ZLOO  
‡ 2Q VRPH SUREOHP VHVV WKHUHU ZLOO DEOH FDQ (7KH  
DUH WUXO\ H[WUD FUHGLW WKH FDQ RQ \ WKHL HQ GR RU W  
ZLOO FDOFXODWH JUDGHV IRU HYMUD VWXGHQWS ZRWH R R W  
, ZLOO UHWXUQ WR P\ DVVHV VPHQW V SXHGHQWKH ZWRDQ  
DQG DW OHDVW VRPHWLPHV VXFFHVMXODFDWOLHP SWRG O

3SUREOHP VHVV DQG TXL] GHGOLQHVS RQIDGLQJ FHOO SKR

‡ /LNH PDQ\ FRXUVHV EXW XQOLNH FRXUVH WKLW WRS  
FRXUVH LV VHTXHQLDO LQ QDWLCHO LKOW EM XQXQW B O  
XQOHVV 7XHVGD\ V PDWHULDO KDV EXHQHQ PDWV G HGJ PDK  
HDVLHU DQVZHUV WR TXL]]HV DQ SUREOHP O/HMWB UOW  
GDWH DQG WLPH 7KLV PHDQV VWU]]FW G G SOLRCH PR VH

‡ 7KH ORZHVW SUREOHP VHVV VFRUH G DSSWG H OIRZHQ V  
WKLW SROLF\ WKH IDFW WKDW V DOW WU RQKHZD OOL EQPSRW  
DQG WKH LPSRUWDQFH RI NHHSLQQ R S D W H S W R E D M F U L H M  
TXL]]HV ZLOO EH DFFHSWHG

6XFFHVVIXO VWXGHQV HLQH QILUD O VXU OD RZLHG WHQW UH  
‡ UHYLHZ \RXU QRWHV VRPHWLPH D R X W V O H F W X U H EXW  
‡ ZRUN ILUVW RQ J D K S K R E O R D W F W X U K X U V G D V H V S H F  
DSSOLHV WR VWXGHQWV ZLWK 7KXUVGD\ DIWHUQRRQ U  
WDNH WKH RQOLQH WLPHG TXL] E\ 7XHGD\ V OHFWXUH  
ILQLVK WKH SUREOHP VHVV E\ 7KXUVGD\ V OHFWXUH

1RWH \RX PD\ ZRUN WRJHWKHU RQ+ S Z R E O P H D F W V V W X I Q H  
PXVW KDQG LQ WKH ZULWWHQ SUREOHP VHVV VROXWLRQV

‡ &HOO SKRQH ODSWRS SROLF\  
BB

*Notice for students with disabilities*

,I \RX TXDOLI\ IRU DFFRPPRGDWLRQV XE PD W V W R P B G LOHD  
IURP 'LVDELQW\ 6HUFLFHV LQ D W D Q E O P G Q H V V H G W K D  
'LVDELQW\ 6HUFLFHV GHWHUPLQH V H D F R P E G O M W L R Q W E  
&RQWDFW : LOODUG D Q Q L Z Z H & R Y O L F H D G R ('8

