## **Honors Specialization in Statistics (20.0 courses)**

This is a guide only. For complete information, see the <u>online Academic Calendar</u> Last updated June 8, 2021

Calculus 1000A/B or 1500A/B       Breadth Requirement:         Calculus 1501A/B(recommended) or Calculus 1301A/B with a mark of 85%+         Mathematics 1600A/B         15. other principal courses         2.0 options         Parkingsion to Honors Specialization Modular         Complete first year (50 courses) with no failures including:         Complete first year (50 courses) with no failures including:         Complete first year (50 courses) with no failures including:         Complete first year (50 courses) with no failures including:         Complete first year (50 courses) with no failures including:         Complete first year (50 courses)         Calculus 1000A/B to the principal courses:         Calculus 1000A/B to tother principal courses:         Calculus 1000A/B to the principal courses:         Statistical Sciences 1023A/B (and/or statistical Sciences 1024A/b)         NOTE 1: If not taken in first year, wath 1600A/B must be completed prior to the second term discond for order in at 88A/b, 838A/b, 838	Year 1 (5.0 Courses)	<b>Graduation Requirements</b>
Calculus 1501A/8 (recommended) or Calculus 1301A/8 with a mark of 85%+       • At tess 1.0 courses control Category A, B, and C as listed in the Academic Calendar.         1.5 other principal courses       • 2.0 easay course (1.0 must be senior course). Note that any modular essay course taken can be used towards this any modular essay course taken can be used towards this any modular essay course taken can be used towards this any modular essay course taken can be used towards this any modular essay course taken can be used towards this any modular essay course taken can be used towards this any modular essay course taken can be used towards this any modular essay course taken can be used towards this any modular essay course taken can be used towards this any modular essay course taken can be used towards this any modular essay course taken can be used towards this any modular essay courses (1.0 must be service the any of the 3 principal courses.         • Minimum averail exercises       • Calculus 1000A/8 to 1500A/8         • Calculus 1000A/8 to 1500A/8       • Essay Requirements:         • Calculus 1000A/8 to 1500A/8       • Essay Requirements:         • Calculus 1000A/8 to 1500A/8       • Minimum condular exercise of 65% on the 200 courses         • Mothermatics 1600A/8 to 1500A/8       • Minimum condular ecourse of the module         • Calculus 1000A/8 to 1500A/8       • Minimum condular ecourse of the module         • Calculus 200A/8 to 100A/8 to 200A/8 to 200A/8       • Minimum condular ecourses must be completed for Mathematics 1600 A/8.         MODELE [5.0 Courses 9       • Calculus 200A/8, 365A/4, 865A/4, 853A/4, 865A/4, 853A/4, 865A/4, 863A/4, 865A/4,	Calculus 1000A/B or 1500A/B	Breadth Requirement:
Mathematics 1600A/B       Eisted in the Academic Calendar.         1.5 other principal courses       2.0 options         2.0 options       2.0 essay courses (1.0 must be senior course). Note that any modular essay courses (and use senior course). Note that any modular essay courses (and use senior course). Note that any modular essay courses (and use senior course). Note that any modular essay courses (and use senior course). Note that any modular essay courses (and use senior course). Note that any modular essay courses (and use senior course). Note that any modular essay courses (and use senior course). Note that any modular essay courses (and use senior course). Note that any modular essay courses (and use senior course). Note that any modular essay courses (and use senior course). Note that any modular essay courses (and use senior course). Note that any modular essay courses (and use any modular essay course of the module essay essay. Statistical Sciences 1023A/B with a mark of at least 85% of the acourse of the module and the essay and the and the acourse of the module and the essay and the any modular courses must be completed prior to the second term of second year.         NOTE 1: If not taken in first year, Math 1600A/B must be completed prior to the second year.       The majority of your modular courses must be completed at the acourse of the module and the faculty of Science         NOTE 1: If not taken in first year, Math 1600A/B must be course equirements.       The majority of your modular courses must be completed for to the second year.         NOTE 1: If not taken in first year, Gada/B, gastaria, Science 3023A/B, gastaris and advintait. Af may be substituted for the 1.0 Calculus cours	Calculus 1501A/B(recommended) or Calculus 1301A/B with a mark of 85%+	• At least 1.0 course from each of Category A, B, and C as
1.5 other principal courses       2.0 options         2.0 options       2.0 options         NOTE: At least 1.0 course must be chosen from two of Category A, B, and C as itsed in the Academic Calendar(e.g. 1.0 from A and 1.0 from C)       2.0 escience course taken can be used towards this requirement         Admission to Honors Specialization Module:       1.3.0 entor courses (numbered 2000-4999)         Admission to Honors Specialization Module:       1.3.0 entor courses (numbered 2000-4999)         Complete first year (3.0 course) with no failures including:       1.3.0 entor courses (numbered 2000-4999)         Admission to Honors Specialization Module:       1.3.0 entor courses (numbered 2000-4999)         Admission to Honors Specialization Module:       1.3.0 entor courses (numbered 2000-4999)         Admission to Honors Specialization Module:       1.3.0 entor courses (numbered 2000-4999)         Admission to the courses:       1.3.0 entor courses (numbered 2000-4999)         Admission to Minor Module:       1.3.0 entor courses (numbered 2000-4999)         Admission to Admission (1.0 excluse 1000/8       Minimum cumulative modula: exerge of 70% and a minimum mark of 60% in each course         NoTE: I: Hor taken first year, Math 1600A/8 must be completed prior to the second term of second year.       The majority of your modula: courses must be completed at Western University. Please check academic calendar for other requirements.         NOTE: I: Admidal may be substituted for then 1.0 Calculus course enquirements. <td< td=""><td>Mathematics 1600A/B</td><td>listed in the Academic Calendar.</td></td<>	Mathematics 1600A/B	listed in the Academic Calendar.
<ul> <li>2.0 options</li> <li>any modular essay course taken can be used towards this requirement.</li> <li>Motri: At least 1.0 course must be chosen from two of Category A, B, and C as its did in the Academic Calendarleg. 1.0 from A and 1.0 from C)</li> <li>Addmission to Honors Specialization Module:</li> <li>Minimum average of 70% on 3.0 principal courses with no mark less than 60% in any of the 3 principal courses:</li> <li>Calculus 1501/M or Calculus 1301/M or Calculus 2002/M is a Statistical Sciences 1024/M is a statistical Science 13024/M is any be substituted for the 1.0 Calculus course requirements.</li> <li>MOTE1 if not taken in first year, Math 1600A/B must be completed prior to the second year.</li> <li>Socoreses 52:5303/M (2873/M), 2853/M (2853/M, 2853/M, 2853/M,</li></ul>	1.5 other principal courses	• 2.0 essay courses (1.0 must be senior course). Note that
<ul> <li>NOTE: At least 1.0 course must be chosen from two of Category A, B, and C as listed in the Academic Calendar(e.g. 1.0 from A and 1.0 from C)</li> <li>Admission to Honors Specialization Module:</li> <li>Admission to Honors Specialization Module:</li> <li>Minimum average of 70% on 3.0 principal courses with no mark less than 60% in any of the 3 principal courses:</li> <li>Calculus 1501A/B or Calculus 1301A/B with a mark of at least 85% or Matematics 1600A/B or 1500A/B.</li> <li>Calculus 1501A/B or Calculus 1301A/B with a mark of at least 85% or Matematics 1600A/B or 1500A/B.</li> <li>Calculus 100A/B or 1500A/B.</li> <li>Mathematics 1600A/B.</li> <li>Motore in decorres.</li> <li>Mathematics 1600A/B, 2557A/B, 2858A/B, 2657A/B, 2853A/B, 2857A/B, 2853A/B, 2853A/B, 2857A/B, 2853A/B, 2853A/B, 2857A/B, 2853A/B, 2853A/B, 2857A/B, 2853A/B, 2853A/B, 2857A/</li></ul>	2.0 options	any modular essay course taken can be used towards this
Admission to Honors Specialization Module: Complete first year (5.0 courses) with no failures including: • Minimum average of 70% on 3.0 principal courses: • Calculus 1000/8 or 15000/8 • Calculus 1000/8 to 15000/8 • Mathematics 1000/8 to 15000/8 • Mathematics 1000/8 to 1000/8 • Mathematics 1000/8 • Department Recommendation for order in • which modular courses should be taken: • Susseys Ageston • Susseys Ageston • Calculus 2402A/8 • Calculus 2402A • Calculus	<b>NOTE:</b> At least 1.0 course must be chosen from two of Category A, B, and C as listed in the Academic Calendar(e.g. 1.0 from A and 1.0 from C)	Senior Courses:
And ANIALL APS may be substituted for watherhalties 1600 APS.         MODULE (9.0.0 Courses) #       Bog courses: S25037A/B, 2857A/B, 2857A/B, 2864A/B, 3657A/B, 3843A/B, 3858A/B, 3859A/B, 4860A/B, 4820A/B, 4823A/B, Financial Modelis 2402A/B, 4823A/B, Financial Modelis 2402A/B, 4823A/B, financial Model in the calendar year or using calendar in effect in year of module entry.     Demost the counse of the calendar, excluding any other modules of fore dby the Department of Statistical and Actuarial Science.     Third Year     Statistical Probability     Distoremention of statistical and Actuarial Science.     Statistical Statistics     1.0 courses from the 1.5 and/or the 1.0 modular course selection lists         Module shown is as per current calendar, excluding any other modules offered by the Department of Statistical	Admission to Honors Specialization Module:         Complete first year (5.0 courses) with no failures including:         • Minimum average of 70% on 3.0 principal courses with no mark less than 60% in any of the 3 principal courses:         • Calculus 1000A/B or 1500A/B         • Calculus 1501A/B or Calculus 1301A/B with a mark of at least 85%         • Mathematics 1600A/B 1.5 other principal course         Recommended (but not required ) first year courses;         Statistical Sciences 1023A/B (and/or Statistical Sciences 1024A/b)         NOTE 1:       If not taken in first year, Math 1600A/B must be completed prior to the second term of second year.         NOTE 2:       AM1413 may be substituted for the 1.0 Calculus course requirements and AM14111 A/B may be substituted for Mathematics 1600 A/B	<ul> <li>Average Requirements:         <ul> <li>Minimum overall average of 65% on the 20.0 courses</li> <li>Minimum cumulative modular average of 70% and a minimum mark of 60% in each course of the module</li> <li>Passing grade in each course</li> <li>Minimum cumulative modular average of 60% in any additional Major or Minor module completed</li> </ul> </li> <li>Residency Requirement:         <ul> <li>The majority of your modular courses must be completed at Western University. Please check academic calendar for other requirements.</li> </ul> </li> <li>Mote:: To graduate with an Honors BSc, at least 11.0 of your 20.0 courses must be taken from the Faculty of Science</li> </ul>
MODULE (9.0 Courses) #         6.0 courses: S3 2503A/B, 2857A/B, 2857A/B, 3657A/B, 3657A/B, 3843A/B, 3858A/B, 3859A/B, 3860A/B, 4850F/G, 4861A/B, DS3000A/B         0.5 courses: Calculus 2402A/B **         1.5 courses from: Actuarial Science 4823A/B, Statistical Sciences 4844A/B, 4860A/B, 4860A/B, 4860A/B, 3817B, 4521A/B, AM3815A/B, any Statistical Sciences course at the 4000 level.         ** Calculus 2402A/B may be replaced by (Calculus 2502A/B + Calculus 2503A/B). When such a replacement occurs, the module will include 9.5 courses.         # Module shown is as per current calendar year. You may complete module using current calendar year or using calendar in effect in year of module entry.         Department Recommendation for order in which modules an intro stats course.         # Module shown is as per current calendar year. You may complete module using current calendar year or using calendar in effect in year of module entry.         Department Recommendation for order in which modules an intro stats course.         # Induke shown is as per current calendar year. You may complete module using current calendar year or using calendar in effect in year of module entry.         Department Recommendation for order in which modules an intro stats course.         # Itaking another module that includes an intro stats course (anti-req to \$2858), please consult with other department regarding course substitution.         Also, you must complete any additional module with a minimum 60% average.         Notess:         Courses common to more than one module taken require substitution.         However, if	and AM1411 A/B may be substituted for Mathematics 1600 A/B.	, 
# Module shown is as per current calendar year. You may complete module using current calendar year or using calendar in effect in year of module entry.Third YearOPTIONS (6.0 Courses)S3843A Introduction to Study Design SS3859A RegressionThese may also include any additional module in the calendar, excluding any other modules offered by the Department of Statistical and Actuarial Science.S38657A Intermediate ProbabilityIf taking another module that includes an intro stats course (anti-req to S2858), please consult with other department regarding course substitution.S3860B Generalized Linear Models SS3858B Mathematical StatisticsAlso, you must complete any additional module with a minimum 60% average.1.0 courses from the 1.5 and/or the 1.0 modular course selection listsNotes: Courses common to more than one module taken require substitution. However, if both modules are from faculty of science, a maximum of 1.0 courses explicitly required for each module can be counted towards bothFourth Year S\$4850F/G Advanced Data Analysis S\$4861B Time Series	<ul> <li>MODULE (9.0 Courses) #</li> <li>6.0 courses: SS 2503A/B, 2857A/B, 2858A/B, 2864A/B, 3657A/B, 3843A/B, 3858A/B, 3859A/B, 3860A/B, 4850F/G, 4861A/B, DS3000A/B</li> <li>0.5 courses: Calculus 2402A/B **</li> <li>1.5 courses from: Actuarial Science 4823A/B, Statistical Sciences 4844A/B, 4866A/B, 4860A/B, 4864A/B.</li> <li>1.0 courses from: Actuarial Science 3424A/B, 4824A/B, 4823A/B, Financial Modelling 3520A/B, 3613A/B, 3817B, 4521A/B, AM3815A/B, any Statistical Sciences course at the 4000 level.</li> <li>** Calculus 2402A/B may be replaced by (Calculus 2502A/B +Calculus 2503A/B). When such a replacement occurs, the module will include 9.5 courses.</li> </ul>	Department Recommendation for order in which <u>modular</u> courses should be taken: <u>Second Year</u> Calculus 2402A Calculus with Analysis for Statistics SS2857A Probability and Statistics I SS2503B Advanced Mathematics for Statistical Applications SS2858B Probability & Statistics II SS2864B Statistical Programming (now offered both terms)
other modules offered by the Department of Statistical and Actuarial Science.If taking another module that includes an intro stats course (anti-req to \$2858), please consult with other department regarding course substitution.DS3000B Introduction to Machine Learning \$\$3860B Generalized Linear Models \$\$3858B Mathematical StatisticsAlso, you must complete any additional module with a minimum 60% average.1.0 courses from the 1.5 and/or the 1.0 modular course selection listsNotes: Courses common to more than one module taken require substitution. However, if both modules are from faculty of science, a maximum of 1.0 courses explicitly required for each module can be counted towards bothFourth Year \$\$4861B Time Series	<ul> <li>Module shown is as per current calendar year. You may complete module using current calendar year <u>or</u> using calendar in effect in year of module entry.</li> <li>OPTIONS (6.0 Courses) These may also include any additional module in the calendar, <u>excluding</u> any</li> </ul>	Third YearSS3843A Introduction to Study DesignSS3859A RegressionSS3657A Intermediate Probability
Also, you must complete any additional module with a minimum 60% average.          Notes:       1.0 courses from the 1.5 and/or the 1.0 modular course selection lists         Courses common to more than one module taken require substitution.       Fourth Year         However, if both modules are from faculty of science, a maximum of 1.0 courses explicitly required for each module can be counted towards both       S54850F/G Advanced Data Analysis	other modules offered by the Department of Statistical and Actuarial Science. If taking another module that includes an intro stats course (anti-req to S2858), please consult with other department regarding course substitution.	DS3000B Introduction to Machine Learning SS3860B Generalized Linear Models SS3858B Mathematical Statistics
Notes: Courses common to more than one module taken require substitution. However, if both modules are from faculty of science, a maximum of 1.0 courses explicitly required for each module can be counted towards both	Also, you must complete any additional module with a minimum 60% average.	1.0 courses from the 1.5 and/or the 1.0 modular course selection lists
modules.1.5 courses from the 1.5 and/or the 1.0 modular course selection lists $2^{nd}$ Degree students should meet with a faculty counsellor to review other degree requirements (e.g. other than modular courses needed).1.5 courses from the 1.5 and/or the 1.0 modular course selection lists	<b>Notes:</b> Courses common to more than one module taken require substitution. However, if both modules are from faculty of science, a maximum of 1.0 courses <u>explicitly required for each module</u> can be counted towards both modules. <b>2<sup>nd</sup> Degree students should meet with</b> a faculty counsellor to review other degree requirements (e.g other than modular courses needed).	<b>Fourth Year</b> <b>SS4850F/G</b> Advanced Data Analysis <b>SS4861B</b> Time Series 1.5 courses from the 1.5 and/or the 1.0 modular course selection lists
Progression Requirements	Progression Requirements	1
<ul> <li>Minimum cumulative modular average of 70%</li> <li>Minimum mark of 60% in each course of modula</li> </ul>	Minimum cumulative modular average of 70%	

• Passing grade in each option