25 direct contact hours as well as simulated and indirect contact hours will be accrued. Prerequisite: SPA 524. (Restricted to MScSLP students only.)

SPA 526 Voice and Resonance Disorders
★3 *(fi 6)* (either term, 3-0-1). A study of the causes, nature, clinical assessment, and management of voice and resonance disorders. Prerequisites: SPA 502 and SPA 505. (Restricted to MScSLP students only.)

SPA 527 Language and Literacy
★3 *(fi 6)* (either term, 0-4L-0). Study of language development in school-age children and adolescents, with focus on the relationships among oral language, reading, and writing; linguistic tasks faced by these age groups in school and elsewhere; and implications for language assessment and intervention. Prerequisites: SPA 511 and 518. (Restricted to MScSLP students only.)

SPA 528 Fluency
★3 *(fi 6)* (either term, 3-0-1). A study of the development, nature and treatment of stuttering with particular emphasis on management strategies. Pre- or corequisite: SPA 501. (Restricted to MScSLP students only.)

SPA 529 Adult Language Disorders II
★3 *(fi 6)* (either term, 0-4L-0). Study of conditions (other than aphasia) affecting language, social, and cognitive functioning in adults, including traumatic brain injury, dementia, and right hemisphere dysfunction, and issues related to the aging process. Nature of underlying neuropathologies and their implications for differential diagnosis, assessment, and management will be addressed. Prerequisite: SPA 520. (Restricted to MScSLP students only.)

SPA 532 Advanced Clinical Practicum
★4.5 *(fi 9)* (either term, 0-12c-0). Credit. Full-time supervised clinical practice normally for a period of six weeks in an approved clinical service facility. Students will have completed all academic course work and will be prepared to work with a broad range of communication disorders under reduced supervision. A minimum of 75 direct contact hours as well as simulated and indirect contact hours will be accrued. Prerequisites: SPA 525 and all MScSLP academic courses. (Restricted to MScSLP students only.)

SPA 533 Advanced Clinical Practicum
★4.5 *(fi 9)* (either term, 0-12c-0). Credit. Full-time supervised clinical practice normally for a period of six weeks in an approved clinical service facility. Students will have completed all academic course work and will be prepared to work with a broad range of communication disorders under reduced supervision. A minimum of 75 direct contact hours as well as simulated and indirect contact hours will be accrued. Prerequisites: SPA 525 and all MScSLP academic courses. (Restricted to MScSLP students only.)

SPA 534 Aural (Re)habilitation
★3 *(fi 6)* (either term, 0-4L-0). Study of the diagnostic and treatment strategies for communication problems associated with childhood and adult onset hearing loss. Prerequisites: SPA 505, 507, 511 and 515. (Restricted to MScSLP students only.)

SPA 540 Advanced Clinical Practicum
★4.5 *(fi 9)* (either term, 0-12c-0). Credit. Full-time supervised clinical practice normally for a period of six weeks in an approved clinical service facility. Students will have completed all academic course work and will be prepared to work with a broad range of communication disorders under reduced supervision. A minimum of 75 direct contact hours as well as simulated and indirect contact hours will be accrued. Prerequisites: SPA 532 and 533. (Restricted to MScSLP students only.)

SPA 541 Advanced Clinical Practicum
★4.5 *(fi 9)* (either term, 0-12c-0). Credit. Full-time supervised clinical practice normally for a period of six weeks in an approved clinical service facility. Students will have completed all academic course work and will be prepared to work with a broad range of communication disorders under reduced supervision. A minimum of 75 direct contact hours as well as simulated and indirect contact hours will be accrued. Prerequisites: SPA 532 and 533. (Restricted to MScSLP students only.)

SPA 597 Advanced Clinical Practicum
★1-4.5 *(variable)* (either term, variable). May be repeated. Credit. Full-time supervised clinical practice for a period varying from four to twelve weeks in an approved clinical service facility. Students will have completed all academic course work and will be prepared to work with a broad range of communication disorders under reduced supervision. Direct contact hours as well as simulated and indirect contact hours will be accrued. Prerequisite: SPA 516 and 524 and permission of the department. (Restricted to MScSLP students only.)

SPA 598 Directed Individual Reading and Research
★1-12 *(variable)* (either term, variable). May be repeated. Prerequisite: consent of Department. (MScSLP)

SPA 900 Directed Research Project
★3 *(fi 6)* (either term or Spring/Summer, 0-3s-0). Required capping exercise for the MScSLP program. Intended to develop students' inquiry, reflection, critical thinking, and writing skills and to provide a supervised experience in the disciplined investigation of a problem. Prerequisites: SPA 501. (Restricted to MScSLP students only.)

231.259 Statistics, STAT

Department of Mathematical and Statistical Sciences
Faculty of Science

Note: Statistical software packages will normally be used in courses that contain data analysis.

Undergraduate Courses

O STAT 141 Introduction to Statistics
★3 *(fi 6)* (either term, 3-0-0). Random variables and frequency distributions. Averages and variance. The binomial and normal distribution. Sampling distributions and elementary inference. X2-test for contingency tables. Regression and correlation. Analysis of variance. Prerequisite: Pure Mathematics 30 or Mathematics 30-1 or consent of Department. This course may not be taken for credit if credit has been obtained in any STAT course, or in PSYCO 211 or SOC 210.

O STAT 151 Introduction to Applied Statistics I
★3 *(fi 6)* (either term, 3-0-0). Data collection and presentation, descriptive statistics. Probability distributions, sampling distributions and the central limit theorem. Point estimation and hypothesis testing. Correlation and regression analysis. Goodness of fit and contingency table. Prerequisite: Pure MATH 30 or MATH 30-1. This course may not be taken for credit if credit has been obtained in any STAT course, or in PSYCO 211 or SOC 210.

STAT 221 Applied Probability
★3 *(fi 6)* (either term, 3-0-2). Probability models; distribution of one and two random variables; moment generating functions; specific distributions; uniform, binomial, geometric, Poisson, exponential, normal, etc. Markov chains and simple queues. Various applications are considered with emphasis on the analysis of computer systems; simulation techniques are used and the algorithmic approach is used throughout the course. Restricted to Honors and Specialization students in Computing Science and Specialization students in Computational Science (Mathematics). Prerequisites: MATH 101 or 115 or 118 or SCI 100 or equivalent; pre- or corequisite: MATH 102 or 120 or 125 or 127 or equivalent. Credit may not be obtained for both STAT 221 and STAT 265.

STAT 222 Applied Statistics
★3 *(fi 6)* (either term, 3-0-2). Sampling distributions; estimation; hypothesis testing; linear regression. Poisson process; simple queues; models and applications which are primarily of interest to computing scientists. Prerequisite: STAT 221. Note: Credit may be obtained for at most one of STAT 222, 266 and 366.

STAT 235 Introductory Statistics for Engineering
★3.8 *(fi 6)* (either term or Spring/Summer, 3-0-1.5). Descriptive data analysis. Calculus of Probability. Binomial, multinomial, Poisson, normal, beta, exponential, gamma, hypergeometric, and Weibull distributions. Sampling distributions. Estimation, testing hypotheses, goodness-of-fit tests, and one-way analysis of variance. Linear correlation and regression. Sampling. Quality control. Use of a microcomputer software package for statistical analyses in engineering applications. Prerequisite: MATH 100. Corequisite: MATH 101. Credit may not be obtained in STAT 235 if credit has already been obtained in STAT 141, 151, 222, 265, 266; PSYCO 211 or SOC 210. Intended for Engineering students. Other students who take this course will receive ★3.0.

O STAT 252 Introduction to Applied Statistics II
★3 *(fi 6)* (either term, 3-0-2). Methods in applied statistics including regression techniques, analysis of variance and covariance, and methods of data analysis. Applications are taken from Biological, Physical and Social Sciences, and Business. Credit may be received in at most one of STAT 252, 319, 337, or 341. May not be taken for credit if credit has been received for STAT 368 or 378. Prerequisite: STAT 141 or 151 or equivalent.

O STAT 265 Statistics I
★3 *(fi 6)* (first term, 3-0-1). Sample space, events, combinatorial probability, conditional probability, independent events, Bayes Theorem, random variables, discrete random variables, expected values, moment generating function, inequalities, continuous distributions, multivariate distributions, independence. Prerequisite: MATH 115 or SCI 100. Corequisite: MATH 214. Credit may not be obtained for both STAT 265 and STAT 221.

O STAT 266 Statistics II
★3 *(fi 6)* (second term, 3-0-1). Functions of random variables, sampling distributions, Central Limit Theorem, law of large numbers, statistical models for the data, likelihood, parameters and their interpretation, objectives of statistical inference, point and interval estimation, method of moments, basic notions of testing of hypotheses, errors of the first and second kind, significance level, power, p-value. Prerequisites: STAT 265, MATH 214 and 225. Co-requisite: MATH 215. Credit may not be obtained for both STAT 266 and either of STAT 222 or STAT 366.

O STAT 312 Mathematical Methods in Statistics
★3 *(fi 6)* (either term, 3-0-1). Reviews and extends those topics in the prerequisite courses in calculus and linear algebra which are of particular interest in Mathematical Statistics. These include the basics of mathematical reasoning as evidenced by

the presentation of rigorous arguments, notions of continuity, differentiation, Riemann-Stieltjes integration and numerical optimization, and diagonalization results for real symmetric matrices. Applications to statistical theory will include least squares estimation, generating functions, and distribution theory. Prerequisites: MATH 215, 225 and STAT 266.

O STAT 335 Statistical Quality Control and Industrial Statistics
★3 *(fi 6)* (either term, 3-0-0). Control charts for variables and attributes. Process capability analysis. Acceptance sampling: single and multiple attribute and variable acceptance plans. Prerequisite: STAT 235 or 265.

O STAT 337 Biostatistics
★3 *(fi 6)* (first term, 3-0-2). Methods of data analysis useful in Biostatistics including analysis of variance and covariance and nested designs, multiple regression, logistic regression and log-linear models. The concepts will be motivated by problems in the life sciences. Applications to real data will be emphasized through the use of a computer package. Prerequisite: STAT 151 and a 200-level Biological Science course. Note: This course may not be taken for credit if credit has already been obtained in STAT 252, 368 or 378.

O STAT 353 Life Contingencies I
★3 *(fi 6)* (either term, 3-0-0). Time at death random variables, continuous and discrete insurances, endowments and varying annuities, net premiums and reserves. Prerequisites: MATH 253 and STAT 265. Corequisite: MATH 215.

O STAT 354 Life Contingencies II
★3 *(fi 6)* (either term, 3-0-0). Analysis of benefits reserves, multiple life functions, multiple decrement models, applications of multiple decrement theory. Prerequisite: STAT 353. May be offered in alternate years.

O STAT 355 Casualty Insurance
★3 *(fi 6)* (either term, 3-0-0). Utility theory, insurability of risk, the economics of insurance, the ratemaking process, IBNR and chain ladder method, property/casualty loss reserving techniques. Prerequisite: MATH 215, 253, and STAT 265. May be offered in alternate years.

O STAT 361 Sampling Techniques
★3 *(fi 6)* (either term, 3-0-0). Simple random sampling from finite populations, stratified sampling, regression estimators, cluster sampling. Note: This course may only be offered in alternate years. Prerequisite: STAT 266.

O STAT 368 Introduction to Design and Analysis of Experiments
★3 *(fi 6)* (either term, 3-0-0). Basic principles of experimental design, completely randomized design-one way ANOVA and ANCOVA, randomized block design, Latin square design, Multiple comparisons. Nested designs. Factorial experiments. Prerequisites: STAT 266 and a course in Linear Algebra; MATH 225 recommended.

O STAT 371 Probability and Stochastic Processes
★3 *(fi 6)* (either term, 3-0-0). Problem solving of classical probability questions, random walk, gambler's ruin, Markov chains, branching processes. Selected topics of the instructor's choice. Prerequisite: STAT 265.

O STAT 372 Mathematical Statistics
★3 *(fi 6)* (either term, 3-0-0). Laws of large numbers, weak convergence, some asymptotic results, delta method, maximum likelihood estimation, testing, UMP tests, LR tests, nonparametric methods (sign test, rank test), robustness, statistics and their sensitivity properties, prior and posterior distributions, Bayesian inference, conjugate priors, Bayes estimators. Prerequisites: STAT 266, STAT 312.

O STAT 378 Applied Regression Analysis
★3 *(fi 6)* (either term, 3-0-0). Simple linear regression analysis, inference on regression parameters, residual analysis, prediction intervals, weighted least squares. Multiple regression analysis, inference about regression parameters, multicollinearity and its effects, indicator variables, selection of independent variables. Non-linear regression. Prerequisites: STAT 266 and a course in Linear Algebra; Corequisite: STAT 312; MATH 225 recommended.

STAT 400 Industrial Internship Practicum
★3 *(fi 6)* (first term, 0-3s-0). Required by all students who have just completed a Mathematical Sciences Industrial Internship Program and who are in an Honors or Specialization degree in Statistics. Must be completed during the first academic term following return to full-time studies. Note: A grade of F to A+ will be determined by the student's job performance as evaluated by the employer, by the student's performance in the completion of an internship practicum report, and by the student's ability to learn from the experiences of the Internship as demonstrated in an oral presentation. Prerequisite: WKEXP 953.

O STAT 432 Survival Analysis
★3 *(fi 6)* (either term, 3-0-0). Survival models, model estimation from complete and incomplete data samples, parametric survival models with concomitant variables, estimation of life tables from general population data. Prerequisite: STAT 266, 312.

O STAT 441 Applied Statistical Methods for Data Mining
★3 *(fi 6)* (either term, 3-0-1). Principles of statistical model building and analysis applied in linear and generalized linear models and illustrated through multivariate methods such as repeated measures, principal components, and supervised and unsupervised classification. Prerequisites: MATH 120 or 125 or equivalent, STAT 252 or 337 or MGTSC 312 or equivalent, and a 300-level course in an area of application.

O STAT 453 Risk Theory
★3 *(fi 6)* (either term, 3-0-0). Classical ruin theory, individual risk models, collective risk models, models for loss severity: parametric models, tail behavior, models for loss frequency, mixed Poisson models; compound Poisson models, convolutions and recursive methods, probability and moment generating functions. Prerequisite: STAT 266.

O STAT 454 Topics in Actuarial Science
★3 *(fi 6)* (either term, 3-0-0). Topics in actuarial mathematics, as selected by the instructor. Prerequisite: STAT 353 or MATH 353. This course may be offered in alternate years.

O STAT 455 Loss Model and Credibility Theory
★3 *(fi 6)* (either term, 3-0-0). Credibility theory: limited fluctuation; Bayesian; Buhlmann, Buhlmann-Straub; empirical Bayes parameter estimation; statistical inference for loss models; maximum likelihood estimation; effect of policy modifications; model selection. Prerequisite: STAT 453. This course may be offered in alternate years.

O STAT 471 Probability I
★3 *(fi 6)* (first term, 3-0-0). Probability spaces, algebra of events. Elements of combinatorial analysis. Conditional probability, stochastic independence. Special discrete and continuous distributions. Random variables, moments, transformations. Basic limit theorems. Prerequisite: STAT 312, 371.

O STAT 472 Probability II
★3 *(fi 6)* (second term, 3-0-0). Sequences of Bernoulli trials, laws of large numbers, normal approximations. Generating functions, recurrent events, random walks. Introduction to Markov chains. Special topics. Prerequisite: STAT 471.

O STAT 479 Time Series Analysis
★3 *(fi 6)* (either term, 3-0-0). Stationary series, spectral analysis, models in time series: autoregressive, moving average, ARMA and ARIMA. Smoothing series, computational techniques and computer packages for time series. Note: This course may be offered only in alternate years. Prerequisite: STAT 312, 372 and 378.

Graduate Courses

STAT 501 Directed Study I
★3 *(fi 6)* (either term, 3-0-0). Basic principles of experimental design, completely randomized design-one way ANOVA and ANCOVA. Randomized block design. Latin square design, Multiple comparisons. Nested designs. Factorial experiments. Each student will give a written report and seminar presentation highlighting statistical methods used in a research project. Prerequisites: STAT 252 or 337 or equivalent and a course in linear algebra. Note: Not open to graduate students in the Department of Mathematical and Statistical Sciences.

STAT 502 Directed Study II
★3 *(fi 6)* (either term, 3-0-0). Simple linear regression analysis, inference on regression parameters, residual analysis, prediction intervals, weighted least squares. Multiple regression analysis, inference about regression parameters, multicollinearity and its effects, indicator variables, selection of independent variables. Non-linear regression. Each student will give a written report and seminar presentation highlighting statistical methods used in a research project. Prerequisite: STAT 337 or equivalent and a course in linear algebra. Note: Not open to graduate students in the Department of Mathematical and Statistical Sciences.

STAT 503 Directed Study III
★3 *(fi 6)* (either term, 3-0-0). Theory and applications of time series modelling, stationarity, autocorrelation. Spectral properties, filtering. Box-Jenkins models, seasonality. Each student will give a written report and seminar presentation highlighting statistical methods used in a research project. Prerequisite: STAT 372 and 378 or consent of Instructor.

STAT 504 Directed Study IV
★3 *(fi 6)* (either term, 3-0-0). Basic sampling schemes for finite populations: simple random sampling, stratified random sampling, systematic sampling and cluster sampling. Unequal probability sampling. Ratio and regression estimators. Prerequisite: A course in Statistical Inference at the 300 level or permission from the instructor. Note: Not open to graduate students in the Department of Mathematical and Statistical Sciences.

STAT 505 Directed Study V
★3 *(fi 6)* (either term, 3-0-0). Principles of statistical model building and analysis applied in linear and generalized linear models and illustrated through multivariate methods such as repeated measures, principal components, and supervised and unsupervised classification. Each student will give a written report and seminar presentation highlighting statistical methods used in a research project. Prerequisites: One of STAT 368, STAT 378 or consent of instructor.

STAT 512 Techniques of Mathematics for Statistics
★3 *(fi 6)* (either term, 3-0-0). Introduction to mathematical techniques commonly used in theoretical Statistics, with applications. Applications of diagonalization

results for real symmetric matrices, and of continuity, differentiation, Riemann-Stieljes integration and multivariable calculus to the theory of Statistics including least squares estimation, generating functions, distribution theory. Prerequisite: consent of Department.

STAT 532 Survival Analysis
★3 *(fi 6)* (either term, 3-0-0). Survival and hazard functions, censoring, truncation. Non-parametric, parametric and semi-parametric approaches to survival analysis including Kaplan-Meier estimation and Cox's proportional hazards model. Prerequisite: STAT 372 or consent of Department.

STAT 553 Risk Theory
★3 *(fi 6)* (either term, 3-0-0). Classical ruin theory, individual risk models, collective risk models, models for loss severity: parametric models, tail behavior, models for loss frequency, mixed Poisson models; compound Poisson models, convolutions and recursive methods, probability and moment generating functions. Prerequisite: Consent of the Department.

STAT 554 Topics in Actuarial Science
★3 *(fi 6)* (either term, 3-0-0). Topics in actuarial mathematics, as selected by the instructor. Prerequisite: Consent of the Department.

STAT 555 Loss Model and Credibility Theory
★3 *(fi 6)* (either term, 3-0-0). Credibility theory: limited fluctuation; Bayesian; Buhlmann, Buhlmann-Straub; empirical Bayes parameter estimation; statistical inference for loss models; maximum likelihood estimation; effect of policy modifications; model selection. Prerequisite: Consent of the Department.

STAT 556 Topics in Applied Statistics
★3 *(fi 6)* (either term, 3-0-0). The contents will be selected each year from applied topics.

STAT 561 Sample Survey Methodology
★3 *(fi 6)* (either term, 3-0-0). Review of basic sampling schemes: simple random sampling, and stratified random sampling, and systematic sampling. Multistage sampling schemes. Estimation of nonlinear parameters: ratios, regression coefficients, and correlation coefficients. Variance estimation techniques: linearization, BRR, jackknife, and bootstrap. Selected topics: model-based estimation, regression analysis from complex survey data. Relevant computer packages. Prerequisites: STAT 361, 372, 471.

STAT 562 Discrete Data Analysis
★3 *(fi 6)* (either term, 3-0-0). Sampling models and methods of inference for discrete data. Maximum likelihood estimation for complete contingency tables, measures of association and agreement. Goodness-of-fit. Incomplete tables. Analysis of square tables; symmetry and marginal homogeneity. Model selection and closeness of fit; practical aspects. Chi-square tests for categorical data from complex surveys. Prerequisite: STAT 372 or 471.

STAT 566 Methods of Statistical Inference
★3 *(fi 6)* (either term, 3-0-0). An introduction to the theory of statistical inference. Topics to include exponential families and general linear models, likelihood, sufficiency, ancillarity, interval and point estimation, asymptotic approximations. Optional topics as time allows, may include Bayesian methods, Robustness, resampling techniques. This course is intended primarily for MSc students. Prerequisite: STAT 471 or consent of Department.

STAT 568 Design and Analysis of Experiments
★3 *(fi 6)* (either term, 3-0-0). The general linear model. Fully randomized designs, one-way layout, multiple comparisons. Block designs, Latin squares. Factorial designs confounding, fractions. Nested designs, randomization restrictions. Response surface methodology. Analysis of covariance. Prerequisite: STAT 368 and a 400-level STAT course.

STAT 571 Probability and Measure
★3 *(fi 6)* (either term, 3-0-0). Measure and integration, Laws of Large Numbers, convergence of probability measures. Conditional expectation as time permits. Prerequisites: STAT 471 and STAT 512 or their equivalents.

STAT 575 Multivariate Analysis
★3 *(fi 6)* (either term, 3-0-0). The multivariate normal distribution, multivariate regression and analysis of variance, classification, canonical correlation, principal components, factor analysis. Prerequisite: consent of Department.

STAT 578 Regression Analysis
★3 *(fi 6)* (either term, 3-0-0). Multiple linear regression, ordinary and generalized least squares, partial and multiple correlation. Regression diagnostics, collinearity, model building. Nonlinear regression. Selected topics: robust and nonparametric regression, measurement error models. Prerequisites: STAT 378 and a 400-level statistics course.

STAT 580 Stochastic Processes
★3 *(fi 6)* (either term, 3-0-0). Elements of stochastic processes. Discrete and continuous time Markov Chains; Birth and Death processes. Branching processes. Brownian Motion. General Stationary and Markov processes. Examples. Prerequisite: STAT 471 or consent of Instructor.

STAT 590 Statistical Consulting
★3 *(fi 6)* (first term, 3-0-0). Data analysis, problem solving, oral communication with clients, issues in planning experiments and collecting data; practical aspects of consulting and report writing. Corequisite: STAT 568 and 578 or their equivalents.

STAT 600 Reading in Statistics
★3 *(fi 6)* (either term, 3-0-0). Students will be supervised by an individual staff member to participate in areas of research interest of that staff member. Students can register only with the permission of the Chair of the Department in special circumstances. Will not be counted toward the minimum course requirement for graduate credits.

STAT 664 Advanced Statistical Inference
★3 *(fi 6)* (either term, 3-0-0). Modern methods of statistical inference. Various versions of likelihood: conditional, marginal, integrated, profile, partial, empirical. Estimating equations. Semi-parametric models. Foundational issues. Prerequisites: STAT 512 and 566.

STAT 665 Asymptotic Methods in Statistical Inference
★3 *(fi 6)* (either term, 3-0-0). Approximation techniques and asymptotic methods in statistics. Topics may include second and higher order expansions, asymptotics of likelihood based estimation and testing. Edgeworth expansions, exponential tilting, asymptotic relative efficiency, U-, M-, L-, and R-estimation. Prerequisites: STAT 566 or 664 and 512 or the equivalent.

STAT 671 Probability Theory I
★3 *(fi 6)* (either term, 3-0-0). Zero-one laws, sums of independent random variables, three-series criterion, laws of iterated logarithm, laws of large numbers, convergence in distribution, characteristic functions. Bochner's theorem, central limit theorems, discrete time martingales. Prerequisite: STAT 571 or MATH 543 or equivalent.

STAT 672 Probability Theory II
★3 *(fi 6)* (either term, 3-0-0). Martingales and martingale inequalities, stopping theorems, local martingales, quadratic variation. Wiener and Poisson processes, stochastic integration. Ito's formula, semimartingales, Girsanov's theorem, introduction to stochastic differential equations, Markov processes, diffusion. Prerequisite: STAT 671 or equivalent.

STAT 679 Time Series Analysis
★3 *(fi 6)* (either term, 3-0-0). The autocorrelation function and spectrum and their estimates. Linear stationary models; autoregressive, moving average, and mixed models. Linear nonstationary models; autoregressive integrated moving average models. Forecasting. Model identification and estimation. Spectral analysis. Prerequisite: STAT 479 or equivalent.

STAT 766 Topics in Statistics I
★3 *(fi 6)* (either term, 3-0-0).

STAT 900 Directed Research Project
★6 *(fi 12)* (variable, unassigned). Open only to students taking the MSc non-thesis option in statistics.

231.260 Statistique, STATQ

Faculté Saint-Jean

Cours de 1er cycle

STATQ 151 Introduction à la statistique appliquée I
★3 *(fi 6)* (l'un ou l'autre semestre, 3-0-2). Collecte de données et leur présentation, statistiques descriptives. Loi de probabilité, distribution d'échantillonnage et théorème limite central, estimation ponctuelle et tests d'hypothèses. Corrélation et régression linéaire simple. Mesure d'ajustement et tableaux de contingences. Préalable(s): Mathématiques 30. Note: Ce cours n'est pas accessible aux étudiants ayant ou postulant des crédits pour un cours de STAT, PSYCO 211, SCSOC 322, ou SOC 210.

STATQ 235 Introduction à la statistique pour scientifiques et ingénieurs
★3 *(fi 6)* (l'un ou l'autre semestre, 3-0-3/2). Analyse de données descriptive. Calculs de probabilité. Distributions binomiale, multinomiale, de Poisson, normale, bêta, exponentielle, gamma, hypergéométrique et de Weibul. Distributions d'échantillonnage. Estimation, test d'hypothèses, qualité de l'ajustement et analyse de la variance à un facteur. Corrélation linéaire et régression. Échantillonnage. Gestion de la qualité. Utilisation de progiciel pour des analyses statistiques et des applications pratiques. Préalable : MATHQ 100. Concomitant : MATHQ 101. Notes : (1) Ce cours n'est pas accessible aux étudiants ayant ou postulant des crédits pour STAT 141, 222, 265, 266, STATQ 151, PSYCO 211 ou SOC 210. (2) Les étudiants de la Faculty of Engineering obtiendront ★3.8.

231.261 Strategic Management and Organization, SMO

Department of Strategic Management and Organization
Faculty of Business