

Graduate Council Report
May 1, 2014

New Course Request:

INTA 635. Great Famines, War and Humanitarian Assistance. (3-0) Credit 3. Course will explore famines, their various definitions, theories of their causes and consequences; how those affected by them cope with the stages through which famines pass, and means by which they may be predicted, measured and assessed.

NRSC 616. Advanced Developmental Neurotoxicology. (3-0) Credit 3. Study of mechanisms of toxicity of substances potentially devastating to the developing brain and spinal cord including lead, mercury and other heavy metals, alcohol, nicotine (smoking), pesticides, flame retardants, and others. Cross-listed with: VIBS 616. Prerequisite(s): Graduate status or approval of instructor.

SYEN 641. Systems Engineering Methods and Frameworks. (3-0). Credit 3. Concepts, methodologies, methods and tools for discovery, definition, analysis, design, creation and sustainment of systems involving information, physical and human elements; architecture modeling methods include IDEF/UPDM; systems engineering frameworks include DoDAF/MoDAF, and Zachman; analysis tools include executable architectures to assess consistency, interoperability and performance. Prerequisite(s): Math 304 or approval of instructor.

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Course Change Request:

STAT 616: Multivariate Analysis

COURSE TITLE AND CATALOG DESCRIPTION:

FROM: Multivariate Analysis. (3-0). Credit 3. Multivariate normal distributions and multivariate generalizations of classical test criteria, Hotelling's T^2 , discriminate analysis and elements of factor and canonical analysis.

TO: Statistical Aspects of Machine Learning I: Classical Multivariate Methods. (3-0). Credit 3. Core methods from traditional multivariate analysis and various extensions. Probability distributions of random vectors and matrices, multivariate normal distributions, model assessment and selection in multiple regression, multivariate regression, dimension reduction, linear discriminant analysis, logistic discriminant analysis, cluster analysis, multidimensional scaling and distance geometry, and correspondence analysis.

PREREQUISITE(S):

FROM: STAT 161, STAT 612

TO: STAT 612, STAT 613

STAT 618: Statistical Aspects of Machine Learning and Data Mining

COURSE TITLE AND CATALOG DESCRIPTION

FROM: Statistical Aspects of Machine Learning and Data Mining. (3-0). Credit 3. Examines the statistical aspects of techniques used to examine data streams which are large scale, dynamic, and heterogeneous; examines the underlying statistical properties of classification; trees; bagging and boosting methods; neural networks; support vector machines; cluster analysis; and independent component analysis.

TO: Statistical Aspect of Machine Learning II: Modern Techniques. (3-0). Credit 3. Second course in statistical machine learning. Recursive partition and tree-based methods, artificial neural networks, support vector machines, reproducing kernels, committee machines, latent variable methods, component analysis, nonlinear dimensionality reduction and manifold learning, matrix factorization and matrix completion, statistical analysis of tensors and multi-indexed data.

PREREQUISITE(S):

FROM: STAT 610, STAT 611, and STAT 613

TO: STAT 612, STAT 613, and STAT 616

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STAT 636: Methods in Multivariate Analysis

COURSE TITLE AND CATALOG DESCRIPTION

FROM: Methods in Multivariate Analysis. (3-0). Credit 3. Multivariate extension of the chi-square and t-tests, discrimination and classification procedures; applications to diagnostic problems in biological, medical, anthropological and social research; multivariate analysis of variance, principal component and factor analysis, canonical correlations.

TO: Applied Multivariate Analysis. (3-0). Credit 3. Multivariate extension of the chi-square and t-tests, discrimination and classification procedures; applications to diagnostic problems in biological, medical, anthropological and social research; multivariate analysis of variance, principal component and factor analysis, canonical correlations.

PREREQUISITE(S):

FROM: MATH 423, STAT 653

TO: MATH 304, STAT 608

STAT 656: Applied Analytics Using SAS Enterprise Miner

PREREQUISITE(S):

FROM: STAT 657

TO: STAT 657, STAT 659

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Special Consideration Items:

Systems Engineering New Master of Engineering Degree Program

Closure of Master of Science in Public Health Degree in Health Policy and Management Program

Closure of Masters in Public Health in Health Policy and Management Program in McAllen

Proposal for an Executive Master of Health Administration Distance Education Program

Distance Education Master of Engineering in Mechanical Engineering