SOUTH DAKOTA BOARD OF REGENTS
Revised Course Request: Common Course

SDSU Mathematics and Statistics Laurie Stenberg Nichols 4/5/11

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<td>SDSU</td>
<td>Kurt J. Capwell</td>
<td>Lewis Brown</td>
<td>2-22-11</td>
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<tr>
<td>USD</td>
<td>Computer Science</td>
<td>Simmons D. Regrado</td>
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Indicate (X) the universities that offer the common course.

_____ BHSU _____ DSU _____ NSU _____ SDSMT X _____ SDSU X _____ USD

Section 1. Course Title and Description

Prefix & No. Course Title Credits
CSS 703 Statistical Modeling & Computing 3

Course Description as it currently appears in the system common course database:
This course covers computationally intensive statistical methods that would not be feasible without modern computational resources. Topics may include: nonparametric density estimation including kernel methods, orthogonal series methods and multivariate methods; recursive methods; cross-validation; nonparametric regression; penalized smoothing splines; jackknife and bootstrapping techniques; computational aspects of exploratory methods including the grand tour, projection pursuit, alternating conditional expectations, and inverse regression methods; random variables and distributions, characteristic functions, and stochastic convergence; optimal estimation, maximum-likelihood estimation, asymptotic theory, Bayesian methods, likelihood-ratio tests, statistical decision theory, and sequential methods.

Section 2. Modification(s) Requested

X Course deletion to

Current

New

Indicate the universities which will be deleting the course:

_____ BHSU _____ DSU _____ NSU _____ SDSMT X _____ SDSU X _____ USD

Justification for all changes noted above: SDSU will replace CSS 703 with the new course STAT 721 Statistical Computing and Simulation that has somewhat different emphases and more rigorous prerequisites.

Section 4. To Be Completed by Academic Affairs

Current to

New

______ Change in University Dept Code

______ Change in CIP Code

_________________________ to

_________________________