End-of-Program Review 2006-07
Mathematics in Programs


|  | Extensively | Moderately | A Little | Not at All | Math Indicated (Extent Missing) | Percent of Programs with any Math | Programs with any Math (N) | Programs Responded (N) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| All programs | 16.9\% | 16.1\% | 23.7\% | 42.4\% | 0.8\% | 58\% | 68 | 118 |
| Core programs | 11.1\% | 33.3\% | 22.2\% | 33.3\% | 0.0\% | 67\% | 6 | 9 |
| Culture, Text and Language | 0.0\% | 7.1\% | 0.0\% | 92.9\% | 0.0\% | 7\% | 1 | 14 |
| Expressive Arts | 0.0\% | 12.5\% | 25.0\% | 62.5\% | 0.0\% | 38\% | 3 | 8 |
| Environmental Studies | 18.2\% | 27.3\% | 54.5\% | 0.0\% | 0.0\% | 100\% | 11 | 11 |
| Evening and Weekend Studies | 5.6\% | 0.0\% | 16.7\% | 72.2\% | 5.6\% | 28\% | 5 | 18 |
| Interarea | 0.0\% | 23.8\% | 42.9\% | 33.3\% | 0.0\% | 67\% | 14 | 21 |
| Scientific Inquiry | 75.0\% | 18.8\% | 6.3\% | 0.0\% | 0.0\% | 100\% | 16 | 16 |
| Society, Politics, Behavior and Change | 25.0\% | 6.3\% | 31.3\% | 37.5\% | 0.0\% | 63\% | 10 | 16 |
| Tribal: Reservation-based | 0.0\% | 40.0\% | 0.0\% | 60.0\% | 0.0\% | 40\% | 2 | 5 |

Note: Courses, contracts, internships, and Student Originated Studies (SOS) programs were not asked to participate in the End-ofProgram Review.

## End-of-Program Review 2006-07 <br> Mathematics in Programs

Level(s) at which mathematics were taught in programs that included it, $\mathbf{N}=\mathbf{6 8}$
Faculty could check all that apply; therefore, numbers do not add up to $100 \%$

|  | Percent of <br> Programs with <br> Sciences at level | Number of <br> Programs |
| :--- | :---: | :---: |
| Introductory | $72.1 \%$ | 49 |
| Intermediate | $32.4 \%$ | 22 |
| Advanced | $20.6 \%$ | 14 |
| Did not indicate any level | $1.5 \%$ | 1 |


| Areas of Math Incorporated: | Number of Times Mentioned |
| :---: | :---: |
| Algebra | 12 |
| Algebra (Beginning and Intermediate) | 1 |
| Linear algebra, matrix mechanics (applied to quantum mechanics) | 1 |
| Algebraic manipulations | 1 |
| Analyzing patterns in nature | 1 |
| Applied Math -- differential equations, non-linear dynamics, linear algebra, vector calculus. partial differential equations. | 1 |
| Applied Mathematics for Advanced Biology and Chemistry, mostly within a laboratory setting | 1 |
| Basic Numeracy | 1 |
| Business math and Excel spreadsheets | 1 |
| Budgets for projects | 1 |
| Formulas, Budgeting, Marketing | 1 |
| Basic budgets in a brief unit on Business | 1 |
| Simple Budgeting and business planning | 1 |
| Calculation | 1 |
| Calculus | 2 |
| Vector Calculus (applied to electromagnetism) | 1 |
| Advanced Calculus, partial and total differential equations | 1 |
| Computer Architecture | 1 |
| Computer Programming | 2 |
| Computer Science | 2 |
| Content Analysis | 1 |
| Problems that involved conversions and calculations involving logs and exponents, e.g.pH. | 1 |
| Critique of research methods, articles | 1 |
| Data Analysis | 2 |


| Areas of Math Incorporated: | Number of Times Mentioned |
| :---: | :---: |
| Data Analysis (ratios/ proportions, identification of trends/ patterns, and interpreting graphical and tabular data | 1 |
| Mainly used to help students how to read charts of quantitative information, e.g., census data. (Data Analysis?) | 1 |
| [Data Interpretation] Data Supporting for example the chemical make-up of air pollutants and the absolute percentage of each kind in overall NAAQ or CAA standards for factory hog farms: how the courts/ EPA allow point source air pollutants to rise above levels allowed | 1 |
| [Data Interpretation] Multiple workshops and lectures that involved reading and interpreting graphs/ tables/ charts | 1 |
| Discrete Mathematics | 1 |
| Economics | 1 |
| Some economic analysis | 1 |
| Exponential Growth Models | 1 |
| Finance | 1 |
| Goedel's Incompleteness Theorem | 1 |
| We studied geography and demographics of China by studying population growth/ distribution and making a Chinese map. | 1 |
| Geometry | 6 |
| Geometry (Euclidean and non-Euclidean) | 1 |
| Geometry (Introductory) | 1 |
| History and Philosophy of Mathematics | 2 |
| Philosophy of Mathematics | 1 |
| Identification and Analysis of Trends | 1 |
| Interpreting graphs, tables, charts | 2 |
| Logic | 6 |
| Math to understand elements of Physics. | 1 |
| Measuring | 1 |
| Quantitative Methods for Business | 1 |
| Quantitative Reasoning | 5 |
| Quantitative and Symbolic reasoning-navigation | 1 |
| Quantitative Reasoning in the area of Architectural Design | 1 |
| Pattern Description | 1 |
| Perspective Drawing (four-week module) | 1 |
| Pre-Calculus | 1 |
| Probability and Algebra to Calculus levels of relatedness in family groups, and to calculate cost-benefit analyses associated with various behaviors. | 1 |
| Proportional Reasoning | 1 |
| Research | 1 |
| Research Methods. This included Quantitative, Qualitative and Mixed Methods. | 1 |
| Sampling | 1 |


|  | Number of <br> Times <br> Mentioned |
| :--- | ---: |
| Areas of Math Incorporated: | 1 |
| Scientific Mathematics | 1 |
| Set Theory | 1 |
| Spatial Analysis | 1 |
| Spread sheet Analysis, including pivot tables for analyzing very | 1 |
| large data sets. | 15 |
| Spreadsheet use | 2 |
| Statistics | 1 |
| Statistics (Introductory) | 1 |
| Statistics (Introductory and Advanced) | 1 |
| Statistics (Introductory and Intermediate) | 1 |
| Statistical and Quantitative Methods in Ecology | 1 |
| Stella modeling software that uses rates of change and amounts | 1 |
| as the basic tools for building models of environmental systems. | 1 |
| Some discussion of Statistical Thinking and Inference | 1 |
| Some Statistical Analysis on Women's issues | 1 |
| Strategic Reasoning | 1 |
| Study Design | 1 |
| Timelines and Timecharts | 1 |
| Trigonometry | 1 |
| Trigonometry (Introductory) | 1 |
| Unit Conversions | 2 |
| Use of public data |  |
| Vector Analysis |  |

## Additional Comments

Logic and Statistics to calculate (for example) appropriate ceilings or caps for carbon trading proposals as part of global warming legislation. (Note: Logic and Statistics are counted in the table above)

