

# SUMMARY PROPOSAL BUDGET

YEAR 1

| ORGANIZATION<br><b>University of Hawaii</b>   |   |        |  | FOR NSF USE ONLY                |                              |                                   |   |
|---|---|--------|--|---------------------------------|------------------------------|-----------------------------------|---|
|   |   |        |  | PROPOSAL NO.                    | DURATION (months)            |                                   |   |
| PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR<br><b>Leon Richards</b>   |   |        |  | AWARD NO.                       | Proposed                     | Granted                           |   |
| A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates<br>(List each separately with title, A.7. show number in brackets) |   |        |  | NSF Funded<br>Person-months     |                              | Funds<br>Requested By<br>proposer | Funds<br>granted by NSF<br>(if different) |
|   |   |        |  | CAL                             | ACAD                         | SUMR                              |   |
| 1.  | <b>Leon Richards - PI</b>                                     |        |  | 0.00                            | 0.00                         | 0.00                              | \$ 0                                      |
| 2.  | <b>Robert W Franco - CO-PI</b>                                |        |  | 0.00                            | 0.00                         | 0.00                              | 0   |
| 3.  | <b>Judith O Kirkpatrick - CO-PI</b>                           |        |  | 0.00                            | 3.60                         | 0.00                              | 18,228                                    |
| 4.  | <b>Louise Pagotto</b>   |        |  | 0.00                            | 0.00                         | 0.00                              | 0   |
| 5.  | <b>John Rand - CO-PI/PD</b>                                   |        |  | 0.00                            | 4.50                         | 0.00                              | 22,785                                    |
| 6.  | ( 0 ) OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE) |        |  | 0.00                            | 0.00                         | 0.00                              | 0   |
| 7.  | ( 5 ) TOTAL SENIOR PERSONNEL (1 - 6)                          |        |  | 0.00                            | 8.10                         | 0.00                              | 41,013                                    |
| B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)   |   |        |  |                                 |                              |                                   |   |
| 1.  | ( 0 ) POST DOCTORAL SCHOLARS                                  |        |  | 0.00                            | 0.00                         | 0.00                              | 0   |
| 2.  | ( 0 ) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)      |        |  | 0.00                            | 0.00                         | 0.00                              | 0   |
| 3.  | ( 0 ) GRADUATE STUDENTS                                       |        |  |                                 |                              |                                   | 0   |
| 4.  | ( 2 ) UNDERGRADUATE STUDENTS                                  |        |  |                                 |                              |                                   | 2,400                                     |
| 5.  | ( 1 ) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)            |        |  |                                 |                              |                                   | 28,000                                    |
| 6.  | ( 4 ) OTHER   |        |  |                                 |                              |                                   | 18,228                                    |
| TOTAL SALARIES AND WAGES (A + B)  |   |        |  |                                 |                              |                                   | 89,641                                    |
| C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)   |   |        |  |                                 |                              |                                   | 13,616                                    |
| TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)   |   |        |  |                                 |                              |                                   | 103,257                                   |
| D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING \$5,000.)   |   |        |  |                                 |                              |                                   |   |
| TOTAL EQUIPMENT   |   |        |  |                                 |                              |                                   | 0   |
| E. TRAVEL   |   |        |  |                                 |                              |                                   | 17,700                                    |
| 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSESSIONS)   |   |        |  |                                 |                              |                                   | 17,700                                    |
| 2. FOREIGN  |   |        |  |                                 |                              |                                   | 0   |
| F. PARTICIPANT SUPPORT COSTS  |   |        |  |                                 |                              |                                   |   |
| 1.  | STIPENDS \$   | 12,000 |  |                                 |                              |                                   |   |
| 2.  | TRAVEL  | 12,000 |  |                                 |                              |                                   |   |
| 3.  | SUBSISTENCE   | 400    |  |                                 |                              |                                   |   |
| 4.  | OTHER   | 10,000 |  |                                 |                              |                                   |   |
| TOTAL NUMBER OF PARTICIPANTS ( 18 )   |   |        |  |                                 |                              |                                   |   |
| TOTAL PARTICIPANT COSTS   |   |        |  |                                 |                              |                                   | 34,400                                    |
| G. OTHER DIRECT COSTS   |   |        |  |                                 |                              |                                   |   |
| 1.  | MATERIALS AND SUPPLIES  |        |  |                                 |                              |                                   | 4,000                                     |
| 2.  | PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION                 |        |  |                                 |                              |                                   | 275                                       |
| 3.  | CONSULTANT SERVICES   |        |  |                                 |                              |                                   | 4,750                                     |
| 4.  | COMPUTER SERVICES   |        |  |                                 |                              |                                   | 0   |
| 5.  | SUBAWARDS   |        |  |                                 |                              |                                   | 0   |
| 6.  | OTHER   |        |  |                                 |                              |                                   | 0   |
| TOTAL OTHER DIRECT COSTS  |   |        |  |                                 |                              |                                   | 9,025                                     |
| H. TOTAL DIRECT COSTS (A THROUGH G)   |   |        |  |                                 |                              |                                   | 164,382                                   |
| I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE)  |   |        |  |                                 |                              |                                   |   |
| <b>FirstIndirectCostItem (Rate: 27.4000, Base: 129982)</b>  |   |        |  |                                 |                              |                                   |   |
| TOTAL INDIRECT COSTS (F&A)  |   |        |  |                                 |                              |                                   | 35,615                                    |
| J. TOTAL DIRECT AND INDIRECT COSTS (H + I)  |   |        |  |                                 |                              |                                   | 199,997                                   |
| K. RESIDUAL FUNDS   |   |        |  |                                 |                              |                                   | 0   |
| L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K)  |   |        |  |                                 |                              |                                   | \$ 199,997                                |
| M. COST SHARING PROPOSED LEVEL \$   |   |        |  | 0                               | AGREED LEVEL IF DIFFERENT \$ |                                   |   |
| PI/PD NAME<br><b>Leon Richards</b>  |   |        |  | FOR NSF USE ONLY                |                              |                                   |   |
| ORG. REP. NAME*   |   |        |  | INDIRECT COST RATE VERIFICATION |                              |                                   |   |
|   |   |        |  | Date Checked                    | Date Of Rate Sheet           | Initials - ORG                    |   |

# SUMMARY PROPOSAL BUDGET

YEAR 2

| ORGANIZATION<br><b>University of Hawaii</b>   |   |              |                    | FOR NSF USE ONLY                |                   |                             |                                     |
|---|---|--------------|--------------------|---------------------------------|-------------------|-----------------------------|-------------------------------------|
|   |   |              |                    | PROPOSAL NO.                    | DURATION (months) |                             |                                     |
| PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR<br><b>Leon Richards</b>   |   |              |                    | AWARD NO.                       | Proposed          | Granted                     |                                     |
| A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates<br>(List each separately with title, A.7. show number in brackets) |   |              |                    | NSF Funded Person-months        |                   | Funds Requested By proposer | Funds granted by NSF (if different) |
|   |   |              |                    | CAL                             | ACAD              | SUMR                        |                                     |
| 1.  | <b>Leon Richards - PI</b>                                     |              |                    | 0.00                            | 0.00              | 0.00                        | \$ 0                                |
| 2.  | <b>Robert W Franco - CO-PI</b>                                |              |                    | 0.00                            | 0.00              | 0.00                        | 0                                   |
| 3.  | <b>Judith O Kirkpatrick - CO-PI</b>                           |              |                    | 0.00                            | 3.60              | 0.00                        | 18,228                              |
| 4.  | <b>Louise Pagotto</b>   |              |                    | 0.00                            | 0.00              | 0.00                        | 0                                   |
| 5.  | <b>John Rand - CO-PI/PD</b>                                   |              |                    | 0.00                            | 4.50              | 0.00                        | 22,785                              |
| 6.  | ( 0 ) OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE) |              |                    | 0.00                            | 0.00              | 0.00                        | 0                                   |
| 7.  | ( 5 ) TOTAL SENIOR PERSONNEL (1 - 6)                          |              |                    | 0.00                            | 8.10              | 0.00                        | 41,013                              |
| B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)   |   |              |                    |                                 |                   |                             |                                     |
| 1.  | ( 0 ) POST DOCTORAL SCHOLARS                                  |              |                    | 0.00                            | 0.00              | 0.00                        | 0                                   |
| 2.  | ( 0 ) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)      |              |                    | 0.00                            | 0.00              | 0.00                        | 0                                   |
| 3.  | ( 0 ) GRADUATE STUDENTS                                       |              |                    |                                 |                   |                             | 0                                   |
| 4.  | ( 2 ) UNDERGRADUATE STUDENTS                                  |              |                    |                                 |                   |                             | 2,400                               |
| 5.  | ( 1 ) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)            |              |                    |                                 |                   |                             | 28,000                              |
| 6.  | ( 4 ) OTHER   |              |                    |                                 |                   |                             | 18,228                              |
| TOTAL SALARIES AND WAGES (A + B)  |   |              |                    |                                 |                   |                             | 89,641                              |
| C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)   |   |              |                    |                                 |                   |                             | 13,616                              |
| TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)   |   |              |                    |                                 |                   |                             | 103,257                             |
| D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING \$5,000.)   |   |              |                    |                                 |                   |                             |                                     |
| TOTAL EQUIPMENT   |   |              |                    |                                 |                   |                             | 0                                   |
| E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSESSIONS)   |   |              |                    |                                 |                   |                             | 17,700                              |
| 2. FOREIGN  |   |              |                    |                                 |                   |                             | 0                                   |
| F. PARTICIPANT SUPPORT COSTS  |   |              |                    |                                 |                   |                             |                                     |
| 1.  | STIPENDS  | \$           | 12,000             |                                 |                   |                             |                                     |
| 2.  | TRAVEL  |              | 12,000             |                                 |                   |                             |                                     |
| 3.  | SUBSISTENCE   |              | 400                |                                 |                   |                             |                                     |
| 4.  | OTHER   |              | 10,000             |                                 |                   |                             |                                     |
| TOTAL NUMBER OF PARTICIPANTS ( 18 )   |   |              |                    | TOTAL PARTICIPANT COSTS         |                   |                             | 34,400                              |
| G. OTHER DIRECT COSTS   |   |              |                    |                                 |                   |                             |                                     |
| 1. MATERIALS AND SUPPLIES   |   |              |                    |                                 |                   |                             | 4,000                               |
| 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION  |   |              |                    |                                 |                   |                             | 275                                 |
| 3. CONSULTANT SERVICES  |   |              |                    |                                 |                   |                             | 4,750                               |
| 4. COMPUTER SERVICES  |   |              |                    |                                 |                   |                             | 0                                   |
| 5. SUBAWARDS  |   |              |                    |                                 |                   |                             | 0                                   |
| 6. OTHER  |   |              |                    |                                 |                   |                             | 0                                   |
| TOTAL OTHER DIRECT COSTS  |   |              |                    |                                 |                   |                             | 9,025                               |
| H. TOTAL DIRECT COSTS (A THROUGH G)   |   |              |                    |                                 |                   |                             | 164,382                             |
| I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE)<br><b>FirstIndirectCostItem (Rate: 27.4000, Base: 129982)</b>                                |   |              |                    |                                 |                   |                             |                                     |
| TOTAL INDIRECT COSTS (F&A)  |   |              |                    |                                 |                   |                             | 35,615                              |
| J. TOTAL DIRECT AND INDIRECT COSTS (H + I)  |   |              |                    |                                 |                   |                             | 199,997                             |
| K. RESIDUAL FUNDS   |   |              |                    |                                 |                   |                             | 0                                   |
| L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K)  |   |              |                    |                                 |                   |                             | \$ 199,997 \$                       |
| M. COST SHARING PROPOSED LEVEL \$ 0   |   |              |                    | AGREED LEVEL IF DIFFERENT \$    |                   |                             |                                     |
| PI/PD NAME<br><b>Leon Richards</b>  |   |              |                    | FOR NSF USE ONLY                |                   |                             |                                     |
| ORG. REP. NAME*   |   |              |                    | INDIRECT COST RATE VERIFICATION |                   |                             |                                     |
|   |   | Date Checked | Date Of Rate Sheet |                                 |                   | Initials - ORG              |                                     |

# SUMMARY PROPOSAL BUDGET

YEAR 3

| ORGANIZATION<br><b>University of Hawaii</b>   |   |              |                    | FOR NSF USE ONLY                |                   |                             |                                     |
|---|---|--------------|--------------------|---------------------------------|-------------------|-----------------------------|-------------------------------------|
|   |   |              |                    | PROPOSAL NO.                    | DURATION (months) |                             |                                     |
| PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR<br><b>Leon Richards</b>   |   |              |                    | AWARD NO.                       | Proposed          | Granted                     |                                     |
| A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates<br>(List each separately with title, A.7. show number in brackets) |   |              |                    | NSF Funded<br>Person-months     |                   | Funds Requested By proposer | Funds granted by NSF (if different) |
|   |   |              |                    | CAL                             | ACAD              | SUMR                        |                                     |
| 1.  | <b>Leon Richards - PI</b>                                     |              |                    | 0.00                            | 0.00              | 0.00                        | \$ 0                                |
| 2.  | <b>Robert W Franco - CO-PI</b>                                |              |                    | 0.00                            | 0.00              | 0.00                        | 0                                   |
| 3.  | <b>Judith O Kirkpatrick - CO-PI</b>                           |              |                    | 0.00                            | 3.60              | 0.00                        | 18,228                              |
| 4.  | <b>Louise Pagotto</b>   |              |                    | 0.00                            | 0.00              | 0.00                        | 0                                   |
| 5.  | <b>John Rand - CO-PI/PD</b>                                   |              |                    | 0.00                            | 4.50              | 0.00                        | 22,785                              |
| 6.  | ( 0 ) OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE) |              |                    | 0.00                            | 0.00              | 0.00                        | 0                                   |
| 7.  | ( 5 ) TOTAL SENIOR PERSONNEL (1 - 6)                          |              |                    | 0.00                            | 8.10              | 0.00                        | 41,013                              |
| B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)   |   |              |                    |                                 |                   |                             |                                     |
| 1.  | ( 0 ) POST DOCTORAL SCHOLARS                                  |              |                    | 0.00                            | 0.00              | 0.00                        | 0                                   |
| 2.  | ( 0 ) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)      |              |                    | 0.00                            | 0.00              | 0.00                        | 0                                   |
| 3.  | ( 0 ) GRADUATE STUDENTS                                       |              |                    |                                 |                   |                             | 0                                   |
| 4.  | ( 2 ) UNDERGRADUATE STUDENTS                                  |              |                    |                                 |                   |                             | 2,400                               |
| 5.  | ( 1 ) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)            |              |                    |                                 |                   |                             | 28,000                              |
| 6.  | ( 4 ) OTHER   |              |                    |                                 |                   |                             | 18,228                              |
| TOTAL SALARIES AND WAGES (A + B)  |   |              |                    |                                 |                   |                             | 89,641                              |
| C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)   |   |              |                    |                                 |                   |                             | 13,616                              |
| TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)   |   |              |                    |                                 |                   |                             | 103,257                             |
| D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING \$5,000.)   |   |              |                    |                                 |                   |                             |                                     |
| TOTAL EQUIPMENT   |   |              |                    |                                 |                   |                             | 0                                   |
| E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSESSIONS)   |   |              |                    |                                 |                   |                             | 17,700                              |
| 2. FOREIGN  |   |              |                    |                                 |                   |                             | 0                                   |
| F. PARTICIPANT SUPPORT COSTS  |   |              |                    |                                 |                   |                             |                                     |
| 1.  | STIPENDS  | \$           | 12,000             |                                 |                   |                             |                                     |
| 2.  | TRAVEL  |              | 12,000             |                                 |                   |                             |                                     |
| 3.  | SUBSISTENCE   |              | 400                |                                 |                   |                             |                                     |
| 4.  | OTHER   |              | 10,000             |                                 |                   |                             |                                     |
| TOTAL NUMBER OF PARTICIPANTS ( 18 )   |   |              |                    | TOTAL PARTICIPANT COSTS         |                   |                             | 34,400                              |
| G. OTHER DIRECT COSTS   |   |              |                    |                                 |                   |                             |                                     |
| 1.  | MATERIALS AND SUPPLIES  |              |                    |                                 |                   |                             | 4,000                               |
| 2.  | PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION                 |              |                    |                                 |                   |                             | 275                                 |
| 3.  | CONSULTANT SERVICES   |              |                    |                                 |                   |                             | 4,750                               |
| 4.  | COMPUTER SERVICES   |              |                    |                                 |                   |                             | 0                                   |
| 5.  | SUBAWARDS   |              |                    |                                 |                   |                             | 0                                   |
| 6.  | OTHER   |              |                    |                                 |                   |                             | 0                                   |
| TOTAL OTHER DIRECT COSTS  |   |              |                    |                                 |                   |                             | 9,025                               |
| H. TOTAL DIRECT COSTS (A THROUGH G)   |   |              |                    |                                 |                   |                             | 164,382                             |
| I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE)<br><b>FirstIndirectCostItem (Rate: 27.4000, Base: 129982)</b>                                |   |              |                    |                                 |                   |                             |                                     |
| TOTAL INDIRECT COSTS (F&A)  |   |              |                    |                                 |                   |                             | 35,615                              |
| J. TOTAL DIRECT AND INDIRECT COSTS (H + I)  |   |              |                    |                                 |                   |                             | 199,997                             |
| K. RESIDUAL FUNDS   |   |              |                    |                                 |                   |                             | 0                                   |
| L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K)  |   |              |                    |                                 |                   |                             | \$ 199,997 \$                       |
| M. COST SHARING PROPOSED LEVEL \$ 0   |   |              |                    | AGREED LEVEL IF DIFFERENT \$    |                   |                             |                                     |
| PI/PD NAME<br><b>Leon Richards</b>  |   |              |                    | FOR NSF USE ONLY                |                   |                             |                                     |
| ORG. REP. NAME*   |   |              |                    | INDIRECT COST RATE VERIFICATION |                   |                             |                                     |
|   |   | Date Checked | Date Of Rate Sheet | Initials - ORG                  |                   |                             |                                     |

# SUMMARY PROPOSAL BUDGET

YEAR 4

| ORGANIZATION<br><b>University of Hawaii</b>   |  |  |  | FOR NSF USE ONLY                |                    |                                   |   |
|---|--|--|--|---------------------------------|--------------------|-----------------------------------|---|
|   |  |  |  | PROPOSAL NO.                    | DURATION (months)  |                                   |   |
| PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR<br><b>Leon Richards</b>   |  |  |  | Proposed                        | Granted            |                                   |   |
|   |  |  |  | AWARD NO.                       |                    |                                   |   |
| A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates<br>(List each separately with title, A.7. show number in brackets) |  |  |  | NSF Funded<br>Person-months     |                    | Funds<br>Requested By<br>proposer | Funds<br>granted by NSF<br>(if different) |
|   |  |  |  | CAL                             | ACAD               | SUMR                              |   |
| 1. <b>Leon Richards - PI</b>  |  |  |  | 0.00                            | 0.00               | 0.00                              | \$ 0                                      |
| 2. <b>Robert W Franco - CO-PI</b>   |  |  |  | 0.00                            | 0.00               | 0.00                              | 0   |
| 3. <b>Judith O Kirkpatrick - CO-PI</b>  |  |  |  | 0.00                            | 3.60               | 0.00                              | 18,228                                    |
| 4. <b>Louise Pagotto</b>  |  |  |  | 0.00                            | 0.00               | 0.00                              | 0   |
| 5. <b>John Rand - CO-PI/PD</b>  |  |  |  | 0.00                            | 4.50               | 0.00                              | 22,785                                    |
| 6. ( 0 ) OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)  |  |  |  | 0.00                            | 0.00               | 0.00                              | 0   |
| 7. ( 5 ) TOTAL SENIOR PERSONNEL (1 - 6)   |  |  |  | 0.00                            | 8.10               | 0.00                              | 41,013                                    |
| B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)   |  |  |  |                                 |                    |                                   |   |
| 1. ( 0 ) POST DOCTORAL SCHOLARS   |  |  |  | 0.00                            | 0.00               | 0.00                              | 0   |
| 2. ( 0 ) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)   |  |  |  | 0.00                            | 0.00               | 0.00                              | 0   |
| 3. ( 0 ) GRADUATE STUDENTS  |  |  |  |                                 |                    |                                   | 0   |
| 4. ( 2 ) UNDERGRADUATE STUDENTS   |  |  |  |                                 |                    |                                   | 2,400                                     |
| 5. ( 1 ) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)   |  |  |  |                                 |                    |                                   | 28,000                                    |
| 6. ( 4 ) OTHER  |  |  |  |                                 |                    |                                   | 18,228                                    |
| TOTAL SALARIES AND WAGES (A + B)  |  |  |  |                                 |                    |                                   | 89,641                                    |
| C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)   |  |  |  |                                 |                    |                                   | 13,616                                    |
| TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)   |  |  |  |                                 |                    |                                   | 103,257                                   |
| D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING \$5,000.)   |  |  |  |                                 |                    |                                   |   |
| TOTAL EQUIPMENT   |  |  |  |                                 |                    |                                   | 0   |
| E. TRAVEL   |  |  |  |                                 |                    |                                   | 17,700                                    |
| 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSESSIONS)   |  |  |  |                                 |                    |                                   | 17,700                                    |
| 2. FOREIGN  |  |  |  |                                 |                    |                                   | 0   |
| F. PARTICIPANT SUPPORT COSTS  |  |  |  |                                 |                    |                                   |   |
| 1. STIPENDS \$ <u>12,000</u>  |  |  |  |                                 |                    |                                   | 12,000                                    |
| 2. TRAVEL <u>12,000</u>   |  |  |  |                                 |                    |                                   | 12,000                                    |
| 3. SUBSISTENCE <u>400</u>   |  |  |  |                                 |                    |                                   | 400                                       |
| 4. OTHER <u>10,000</u>  |  |  |  |                                 |                    |                                   | 10,000                                    |
| TOTAL NUMBER OF PARTICIPANTS ( 18 )   |  |  |  |                                 |                    |                                   |   |
| TOTAL PARTICIPANT COSTS   |  |  |  |                                 |                    |                                   | 34,400                                    |
| G. OTHER DIRECT COSTS   |  |  |  |                                 |                    |                                   |   |
| 1. MATERIALS AND SUPPLIES   |  |  |  |                                 |                    |                                   | 4,000                                     |
| 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION  |  |  |  |                                 |                    |                                   | 275                                       |
| 3. CONSULTANT SERVICES  |  |  |  |                                 |                    |                                   | 4,750                                     |
| 4. COMPUTER SERVICES  |  |  |  |                                 |                    |                                   | 0   |
| 5. SUBAWARDS  |  |  |  |                                 |                    |                                   | 0   |
| 6. OTHER  |  |  |  |                                 |                    |                                   | 0   |
| TOTAL OTHER DIRECT COSTS  |  |  |  |                                 |                    |                                   | 9,025                                     |
| H. TOTAL DIRECT COSTS (A THROUGH G)   |  |  |  |                                 |                    |                                   | 164,382                                   |
| I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE)  |  |  |  |                                 |                    |                                   |   |
| <b>FirstIndirectCostItem (Rate: 27.4000, Base: 129982)</b>  |  |  |  |                                 |                    |                                   |   |
| TOTAL INDIRECT COSTS (F&A)  |  |  |  |                                 |                    |                                   | 35,615                                    |
| J. TOTAL DIRECT AND INDIRECT COSTS (H + I)  |  |  |  |                                 |                    |                                   | 199,997                                   |
| K. RESIDUAL FUNDS   |  |  |  |                                 |                    |                                   | 0   |
| L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K)  |  |  |  |                                 |                    |                                   | \$ 199,997                                |
| M. COST SHARING PROPOSED LEVEL \$ <b>0</b>  |  |  |  | AGREED LEVEL IF DIFFERENT \$    |                    |                                   |   |
| PI/PD NAME<br><b>Leon Richards</b>  |  |  |  | FOR NSF USE ONLY                |                    |                                   |   |
| ORG. REP. NAME*   |  |  |  | INDIRECT COST RATE VERIFICATION |                    |                                   |   |
|   |  |  |  | Date Checked                    | Date Of Rate Sheet | Initials - ORG                    |   |

# SUMMARY PROPOSAL BUDGET

YEAR 5

| ORGANIZATION<br><b>University of Hawaii</b>   |  |              |  | FOR NSF USE ONLY                |                   |                             |                                     |
|---|--|--------------|--|---------------------------------|-------------------|-----------------------------|-------------------------------------|
|   |  |              |  | PROPOSAL NO.                    | DURATION (months) |                             |                                     |
| PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR<br><b>Leon Richards</b>   |  |              |  | Proposed                        | Granted           |                             |                                     |
|   |  |              |  | AWARD NO.                       |                   |                             |                                     |
| A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates<br>(List each separately with title, A.7. show number in brackets) |  |              |  | NSF Funded Person-months        |                   | Funds Requested By proposer | Funds granted by NSF (if different) |
|   |  |              |  | CAL                             | ACAD              | SUMR                        |                                     |
| 1. <b>Leon Richards - PI</b>  |  |              |  | 0.00                            | 0.00              | 0.00                        | \$ 0                                |
| 2. <b>Robert W Franco - CO-PI</b>   |  |              |  | 0.00                            | 0.00              | 0.00                        | 0                                   |
| 3. <b>Judith O Kirkpatrick - CO-PI</b>  |  |              |  | 0.00                            | 3.60              | 0.00                        | 18,228                              |
| 4. <b>Louise Pagotto</b>  |  |              |  | 0.00                            | 0.00              | 0.00                        | 0                                   |
| 5. <b>John Rand - CO-PI/PD</b>  |  |              |  | 0.00                            | 4.50              | 0.00                        | 22,785                              |
| 6. ( 0 ) OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)  |  |              |  | 0.00                            | 0.00              | 0.00                        | 0                                   |
| 7. ( 5 ) TOTAL SENIOR PERSONNEL (1 - 6)   |  |              |  | 0.00                            | 8.10              | 0.00                        | 41,013                              |
| B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)   |  |              |  |                                 |                   |                             |                                     |
| 1. ( 0 ) POST DOCTORAL SCHOLARS   |  |              |  | 0.00                            | 0.00              | 0.00                        | 0                                   |
| 2. ( 0 ) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)   |  |              |  | 0.00                            | 0.00              | 0.00                        | 0                                   |
| 3. ( 0 ) GRADUATE STUDENTS  |  |              |  |                                 |                   |                             | 0                                   |
| 4. ( 2 ) UNDERGRADUATE STUDENTS   |  |              |  |                                 |                   |                             | 2,400                               |
| 5. ( 1 ) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)   |  |              |  |                                 |                   |                             | 28,000                              |
| 6. ( 4 ) OTHER  |  |              |  |                                 |                   |                             | 18,228                              |
| TOTAL SALARIES AND WAGES (A + B)  |  |              |  |                                 |                   |                             | 89,641                              |
| C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)   |  |              |  |                                 |                   |                             | 13,616                              |
| TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)   |  |              |  |                                 |                   |                             | 103,257                             |
| D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING \$5,000.)   |  |              |  |                                 |                   |                             |                                     |
| TOTAL EQUIPMENT   |  |              |  |                                 |                   |                             | 0                                   |
| E. TRAVEL   |  |              |  |                                 |                   |                             | 17,700                              |
| 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSESSIONS)   |  |              |  |                                 |                   |                             | 17,700                              |
| 2. FOREIGN  |  |              |  |                                 |                   |                             | 0                                   |
| F. PARTICIPANT SUPPORT COSTS  |  |              |  |                                 |                   |                             |                                     |
| 1. STIPENDS \$ <u>12,000</u>  |  |              |  |                                 |                   |                             | 12,000                              |
| 2. TRAVEL <u>12,000</u>   |  |              |  |                                 |                   |                             | 12,000                              |
| 3. SUBSISTENCE <u>400</u>   |  |              |  |                                 |                   |                             | 400                                 |
| 4. OTHER <u>10,000</u>  |  |              |  |                                 |                   |                             | 10,000                              |
| TOTAL NUMBER OF PARTICIPANTS ( 18 )   |  |              |  |                                 |                   |                             |                                     |
| TOTAL PARTICIPANT COSTS   |  |              |  |                                 |                   |                             | 34,400                              |
| G. OTHER DIRECT COSTS   |  |              |  |                                 |                   |                             |                                     |
| 1. MATERIALS AND SUPPLIES   |  |              |  |                                 |                   |                             | 4,000                               |
| 2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION  |  |              |  |                                 |                   |                             | 275                                 |
| 3. CONSULTANT SERVICES  |  |              |  |                                 |                   |                             | 4,750                               |
| 4. COMPUTER SERVICES  |  |              |  |                                 |                   |                             | 0                                   |
| 5. SUBAWARDS  |  |              |  |                                 |                   |                             | 0                                   |
| 6. OTHER  |  |              |  |                                 |                   |                             | 0                                   |
| TOTAL OTHER DIRECT COSTS  |  |              |  |                                 |                   |                             | 9,025                               |
| H. TOTAL DIRECT COSTS (A THROUGH G)   |  |              |  |                                 |                   |                             | 164,382                             |
| I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE)  |  |              |  |                                 |                   |                             |                                     |
| <b>FirstIndirectCostItem (Rate: 27.4000, Base: 129982)</b>  |  |              |  |                                 |                   |                             |                                     |
| TOTAL INDIRECT COSTS (F&A)  |  |              |  |                                 |                   |                             | 35,615                              |
| J. TOTAL DIRECT AND INDIRECT COSTS (H + I)  |  |              |  |                                 |                   |                             | 199,997                             |
| K. RESIDUAL FUNDS   |  |              |  |                                 |                   |                             | 0                                   |
| L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K)  |  |              |  |                                 |                   |                             | \$ 199,997                          |
| M. COST SHARING PROPOSED LEVEL \$ <b>0</b>  |  |              |  | AGREED LEVEL IF DIFFERENT \$    |                   |                             |                                     |
| PI/PD NAME<br><b>Leon Richards</b>  |  |              |  | FOR NSF USE ONLY                |                   |                             |                                     |
| ORG. REP. NAME*   |  |              |  | INDIRECT COST RATE VERIFICATION |                   |                             |                                     |
|   |  | Date Checked |  | Date Of Rate Sheet              |                   | Initials - ORG              |                                     |

# SUMMARY PROPOSAL BUDGET

Cumulative

| ORGANIZATION<br><b>University of Hawaii</b>   |   |    |        | FOR NSF USE ONLY                |                    |                             |                                     |
|---|---|----|--------|---------------------------------|--------------------|-----------------------------|-------------------------------------|
|   |   |    |        | PROPOSAL NO.                    | DURATION (months)  |                             |                                     |
| PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR<br><b>Leon Richards</b>   |   |    |        | AWARD NO.                       | Proposed           | Granted                     |                                     |
| A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates<br>(List each separately with title, A.7. show number in brackets) |   |    |        | NSF Funded<br>Person-months     |                    | Funds Requested By proposer | Funds granted by NSF (if different) |
|   |   |    |        | CAL                             | ACAD               | SUMR                        |                                     |
| 1.  | <b>Leon Richards - PI</b>                                       |    |        | 0.00                            | 0.00               | 0.00                        | \$ 0                                |
| 2.  | <b>Robert W Franco - CO-PI</b>                                  |    |        | 0.00                            | 0.00               | 0.00                        | 0                                   |
| 3.  | <b>Judith O Kirkpatrick - CO-PI</b>                             |    |        | 0.00                            | 18.00              | 0.00                        | 91,140                              |
| 4.  | <b>Louise Pagotto</b>   |    |        | 0.00                            | 0.00               | 0.00                        | 0                                   |
| 5.  | <b>John Rand - CO-PI/PD</b>                                     |    |        | 0.00                            | 22.50              | 0.00                        | 113,925                             |
| 6.  | ( ) OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)     |    |        | 0.00                            | 0.00               | 0.00                        | 0                                   |
| 7.  | ( <b>5</b> ) TOTAL SENIOR PERSONNEL (1 - 6)                     |    |        | 0.00                            | 40.50              | 0.00                        | 205,065                             |
| B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)   |   |    |        |                                 |                    |                             |                                     |
| 1.  | ( <b>0</b> ) POST DOCTORAL SCHOLARS                             |    |        | 0.00                            | 0.00               | 0.00                        | 0                                   |
| 2.  | ( <b>0</b> ) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.) |    |        | 0.00                            | 0.00               | 0.00                        | 0                                   |
| 3.  | ( <b>0</b> ) GRADUATE STUDENTS                                  |    |        |                                 |                    |                             | 0                                   |
| 4.  | ( <b>10</b> ) UNDERGRADUATE STUDENTS                            |    |        |                                 |                    |                             | 12,000                              |
| 5.  | ( <b>5</b> ) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)       |    |        |                                 |                    |                             | 140,000                             |
| 6.  | ( <b>20</b> ) OTHER   |    |        |                                 |                    |                             | 91,140                              |
| TOTAL SALARIES AND WAGES (A + B)  |   |    |        |                                 |                    |                             | 448,205                             |
| C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)   |   |    |        |                                 |                    |                             | 68,080                              |
| TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)   |   |    |        |                                 |                    |                             | 516,285                             |
| D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING \$5,000.)   |   |    |        |                                 |                    |                             |                                     |
| TOTAL EQUIPMENT   |   |    |        |                                 |                    |                             | 0                                   |
| E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSESSIONS)   |   |    |        |                                 |                    |                             | 88,500                              |
| 2. FOREIGN  |   |    |        |                                 |                    |                             | 0                                   |
| F. PARTICIPANT SUPPORT COSTS  |   |    |        |                                 |                    |                             |                                     |
| 1.  | STIPENDS  | \$ | 60,000 |                                 |                    |                             |                                     |
| 2.  | TRAVEL  |    | 60,000 |                                 |                    |                             |                                     |
| 3.  | SUBSISTENCE   |    | 2,000  |                                 |                    |                             |                                     |
| 4.  | OTHER   |    | 50,000 |                                 |                    |                             |                                     |
| TOTAL NUMBER OF PARTICIPANTS ( <b>90</b> )  |   |    |        | TOTAL PARTICIPANT COSTS         |                    |                             | 172,000                             |
| G. OTHER DIRECT COSTS   |   |    |        |                                 |                    |                             |                                     |
| 1.  | MATERIALS AND SUPPLIES  |    |        |                                 |                    |                             | 20,000                              |
| 2.  | PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION                   |    |        |                                 |                    |                             | 1,375                               |
| 3.  | CONSULTANT SERVICES   |    |        |                                 |                    |                             | 23,750                              |
| 4.  | COMPUTER SERVICES   |    |        |                                 |                    |                             | 0                                   |
| 5.  | SUBAWARDS   |    |        |                                 |                    |                             | 0                                   |
| 6.  | OTHER   |    |        |                                 |                    |                             | 0                                   |
| TOTAL OTHER DIRECT COSTS  |   |    |        |                                 |                    |                             | 45,125                              |
| H. TOTAL DIRECT COSTS (A THROUGH G)   |   |    |        |                                 |                    |                             | 821,910                             |
| I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE)  |   |    |        |                                 |                    |                             |                                     |
| TOTAL INDIRECT COSTS (F&A)  |   |    |        |                                 |                    |                             | 178,075                             |
| J. TOTAL DIRECT AND INDIRECT COSTS (H + I)  |   |    |        |                                 |                    |                             | 999,985                             |
| K. RESIDUAL FUNDS   |   |    |        |                                 |                    |                             | 0                                   |
| L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K)  |   |    |        |                                 |                    |                             | \$ 999,985 \$                       |
| M. COST SHARING PROPOSED LEVEL \$ <b>0</b>  |   |    |        | AGREED LEVEL IF DIFFERENT \$    |                    |                             |                                     |
| PI/PD NAME<br><b>Leon Richards</b>  |   |    |        | FOR NSF USE ONLY                |                    |                             |                                     |
| ORG. REP. NAME*   |   |    |        | INDIRECT COST RATE VERIFICATION |                    |                             |                                     |
|   |   |    |        | Date Checked                    | Date Of Rate Sheet | Initials - ORG              |                                     |

C \*ELECTRONIC SIGNATURES REQUIRED FOR REVISED BUDGET

**Kapiolani Community College – I3 Grant  
Year 1 Budget Justification – 12 months (January 1, 2009 – December 31, 2009)**

A. Senior Personnel: The following is a list of Senior Personnel:

1. Leon Richards, Principal Investigator (No cost to NSF I3)
2. Robert Franco, Co-Investigator (No cost to NSF I3)
3. John Rand, Co-Investigator/Project Director (50% FTE)
4. Louise Pagotto, Vice Chancellor (No cost to NSF I3)
5. Judith Kirkpatrick, Professor (12 credits reassign time)

Richards, the Chancellor at Kapiolani Community College (KCC), will serve as the NSF I3 Principal Investigator. Franco, the Director of the Office of Institutional Effectiveness at KCC, will oversee project assessment and evaluation. Rand, the STEM Program Director at KCC, will oversee all NSF I3 activities as Project Director. Kirkpatrick will be reassigned from teaching duties to the Office of Institutional Effectiveness and will serve on the STEM leadership team, assist in faculty development initiatives, and project assessment, evaluation, and reporting. Pagotto will work with the Program Director in overseeing all aspects of the faculty development program including the Summer Institute.

B. Other personnel: KCC will provide services of the STEM Outreach Coordinator and STEM Retention Coordinator to the NSF I3 program, at no cost to the NSF I3 project. Two STEM students (one in Spring and one in Fall) will help support the daily operations of the NSF I3 under the supervision of the STEM Outreach Coordinator. An office administrator will assist the STEM Program Director with daily operations related to the integration of the NSF EHR awards and other STEM activities. Four KCC STEM faculty members will be reassigned from teaching duties, to develop innovative instructional pedagogy to increase student success rates in gateway courses. The focus in the first year will be on Mathematics (Calculus) and Chemistry (CHEM 161). Each faculty member will serve as a mentor for one undergraduate researcher.

C. Fringe Benefits: FB charged for fulltime faculty is 30%, FB charged for lecture replacements and students is 2.7%.

D. Equipment: There are no funds requested for equipment.

E. Travel: The four faculty supported with reassigned time will be provided with funds for travel to the US mainland to investigate and participate in best practice workshops/conferences/summer institutes in STEM education. Four additional faculty will be supported to participate in summer research related travel. Two US mainland trips will be supported for project administration and reporting (NSF JAMS 09). One inter-island trip will be used by project administration for project dissemination. US mainland trips are budgeted at \$1750.00 per trip. Inter-island trips are estimated at \$200.00 per trip.

F. Participant Support Costs:

Stipends – Four Research Interns (RI), will receive a \$2000 to work on a mentored research project as well as \$1000 of research startup funding.

Travel - The four RI will travel to present research at undergraduate research conference. Four additional potential RI students will attend summer REU/Workshops/Internships. Each student trip is estimated at \$1500.

Subsistence - funds will also be provided for working lunches for all are participants at the Summer Institute.

Other - KCC STEM faculty will participate in a STEM Summer Institute in the Summer 2009. Ten STEM faculty will be invited to participate in a 5-day STEM Education Best Practices Summer Institute. Each Institute participant will receive a stipend of \$200/day for 5 days for 10 participants is \$10,000.

G. Other Direct Costs: Materials and Supplies (M&S) cost will be used to support the STEM Summer Institute, faculty-RI teams and for other operational costs associated with the program. Publication costs are required for project promotion and student research poster presentations. The outreach coordinator will publicize STEM pathways and programs to Hawaii public and private high schools.

Consultant fees (\$2000) will support an educational specialist to assist at the Summer Institute. A KCC site visit by 4 External Advisory Committee (EAC) members as described in the NSF I3 proposal will take place each year of the grant. Each advisor will receive \$250 per day stipend for 1-day site visit plus a \$1750.00 travel expense to KCC for one member from the US Mainland and three members from Hawaii. **The consultant rate will not exceed the approved rate of \$537 per day.**

I. Indirect Costs: Indirect costs are charged at a rate 27.4% of all Direct Costs minus Participant Support costs (F.).

For details of budget justifications for Years 2-5 see Year 1 budget justification.