**UNIVERSITY OF HAWAII AT MĀNOA**

**UHM-1 FORM (ADD A COURSE OF STUDY)**

Read instructions on reverse side carefully before filling out this form. For undergraduate courses, submit at least an original and three copies; for graduate courses, submit at least an original and six copies.

1. **Course Subject:** MBBE

2. **Proposed Course Number:** 683

3. **Effective Term (Sem/Year):** Fall 2006

4. **Frequency:**
   - Fall & Spring semester
   - Once a year
   - Fall semester only
   - Other:

5. **Course Title:** Advanced Bioinformatics Topics for Biologists

   **Bioinformatics**

   **8b. BANNER Course Title (30 characters or less):**

6. **Offering (check one):**
   - Regular
   - Experimental (two academic years)
   - Single (one term)

7. **Core or Graduation Requirement (check one):**
   - 1. Request approval of the ___ Diversification or Hawaiian/Second Language designation (DA, DH, DL, D6, DP, DY, D6 or HML).
   - 2. Request approval of the ___ Foundations designation (FW, FS, or FS).
   - 3. Do not consider course for a General Education Core or Graduation Requirement.

8. **Grade Option (check all that apply):**
   - Letter Grade (L)
   - Credit/No Credit (C)
   - Audit (A)
   - Satisfactory/Unsatisfactory (S)
   - No Grading (X) [Graduate courses numbered 500, 700, and 800 only]

9. **Number of Credits:**
   - If variable credit (V), give range:

10. **Repeat Limit:** 0

11. **Credit Limit:** 4

12. **Corequisite Course(s):** (TBD)

13. **Prerequisite Course(s):** Enter course alpha and number for each prerequisite. Use "or" or "and" instead of punctuation. Type "or" (or "concurrent") after each prerequisite course that may be taken concurrently. Also specify what type of waiver is acceptable (check only one).

   Graduate student must work on genomics research project requiring bioinformatic analysis. Working knowledge of UNIX OS, Perl, Java or C, ICS471 and ICS491 and ICS691 or equivalent.

   - Instructor Approval
   - Departmental Approval
   - Other Approval
   - No Waiver

15. **Contact Hours and Instruction Type:** Specify number of minutes per week for appropriate instruction type(s). For courses with variable credits, check all applicable instruction types.

   - Lecture (LEC)
   - Laboratory (LAB)
   - Discussion (DIS)
   - Seminar (SEM)
   - Online Instruction (WEB)
   - Thesis/Dissertation (THE)
   - Directed Reading or Research/Independent Study (DRR)
   - Field Experience/Internship/Practicum (PRA)
   - Two-way Video/Interactive TV (ITV)

16. **Cross-listed Course(s):**

   Course Alpha & Number
   Chair
   Signature
   Date

   Course Alpha & Number
   Chair
   Signature
   Date

17. **Catalog Description:**

   This course teaches problem solving with bioinformatic tools. Real-world problems will be provided and worked out, possibly resulting in publication of the results in peer-reviewed journals. Alternatively, students are encouraged to provide their own research problem with which they require assistance. Access to computational resources will be provided through instructor's laboratory. Limited to eight students.

18. **Justification:**

   Advent of high-throughput genomics research has resulted in an explosion of biological data. Computer-assisted analysis of this data is now a critical component of most molecular biology research. Several classes provide introductions to bioinformatics - no class currently provides hands-on practical experience.

   Requested by:
   MBBE
   Harry Ako
   Signature
   3/16/05

   Approved by:
   CTAHR
   Dean
   Signature
   Date

   2nd College or School
   Dean
   Signature
   Date

   **OFFICE USE ONLY:**

   SIS CATALOG
   SIS PREREQS
   LEVEL
   COLLEGE
   DEPT

   **Graduate Division (600 level and above):**
   Dean
   Date

   **General Education**
   Dean
   Date

   **Mānoa Chancellor's Office**
   Chancellor
   Date