INSTRUCTIONS: UH Hilo Program Impact Prediction Tool

Background: UH Hilo has recently experienced significant growth in a number of areas in both undergraduate and graduate education. The consequences of such growth have been documented to “impact” a number of other academic programs, resources, and services at UH Hilo. It has now critical to predict such impact when proposing new programs at the University. The OPTIONAL web-based “Impact Prediction Tool” is designed to help predict the potential effect of new programs on enrollment numbers in user-selected courses. The tool incorporates an algorithm that will generate predictions of enrollment figures based on historical data (which must first be obtained by the user from an appropriate source, such as a departmental office or the University Registrar).

WHAT YOU WILL NEED in order to use the Impact Prediction Tool:

1. “Predictor Program” – this is an existing program in a similar field to that which is being proposed. For example, if a new program being proposed in the health sciences, then the user may choose either the Pharm.D. (Pharmacy) or B.S. in Nursing as predictors, depending on whether the proposed program is undergraduate or graduate-level. Necessary data regarding the predictor program is detailed in the “Impact Statement” document, and includes information such as the first year the program accepted students (“Predictor Start Year”) and annual matriculation numbers.

2. “Affected Courses” – it is recommended that the five most likely courses to be affected by the proposed program be individually analyzed using the “Impact Prediction Tool”. Results can be reported by filling out the appropriate sections on page 3 of the “Impact Statement” PDF form.

3. Enrollment data for “Affected Courses” – the impact tool allows the user to enter enrollment data for a particular course for up to ten years. Years are to be entered in the format “XXXX”, for example 1998, 1999, 2000, 2001; (NOT 98, 99, 00). Enrollment numbers for that course are to be entered based on Semester. The years chosen for the enrollment data should FLANK THE PREDICTOR START YEAR. Also, years DO NOT need to be consecutive (i.e. you can enter data for 1997, 1999, 2003, 2004, etc., skipping some years if data is not available). Please note that cumulative data for multiple semesters can be entered as well (i.e. Fall + Spring data combined; please be sure to select the appropriate item in the drop-down list under “Semester” in the Impact Tool).

4. “Scaling Factor” – this is defined as the RATIO of total planned enrollment in the Proposed Program to enrollment in the "Predictor Program". This number is generated from data entered into the “Impact Statement”.

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**HOW THE TOOL WORKS:** The algorithm used by the Impact Prediction Tool is simply a linear regression that is applied to course enrollment data prior to the Predictor Program Start Year. This linear relationship is extrapolated to the last year for course enrollment data entered. The difference between the actual enrollment in the course and the predicted enrollment (based on linear extrapolation) is defined as the “**Raw Impact**”. The **Scaling Factor** is applied (which adjusts the impact up or down, depending on the size of the proposed program), which then generates the “**Scaled Difference**” (Adjusted Impact). This adjusted impact is the prediction of how many extra students the proposed program will cause to enroll in the Affected Course.

**HOW TO USE THE TOOL:** After filling out data fields, data are generated using the “**Calculate**” button on the web page. The “**Print Form**” button can be used to print the page (recommended to print individually as PDFs and attach to “Impact Statement” when submitting). The “**Reset Form**” button will clear all fields.

**HOW TO REPORT THE RESULTS:** Data are entered into the “**Impact Statement**” which can then be submitted to the appropriate University committee (e.g. Graduate Council for graduate program review). The **Impact Statement** allows the user to select whether or not to use the Impact Prediction Tool, considering that it might not be appropriate for some programs (e.g. if a new program is being proposed for which there is no appropriate, historical “Predictor Program”). However, in such cases it is still recommended that the “**Impact Statement**” be filled out and submitted, but including a justification for why the Impact Prediction Tool was not used. It is also recommended that **PDF printouts of the Impact Prediction Tool** be attached when submitting the completed Impact Statement. Also, please consult with the appropriate individuals in assessing potential program impact, and include documentation of these consultations or printouts of the “**Impact Consultation Reports**”.

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