

<b>Biostatistics</b>	
<b>Course Code</b>	DIC 8012
<b>Credits</b>	Three ( lectures: 3 hr per week)
<b>Organizers</b>	Pei-Jen Lee Shaner
<b>Lecturers</b>	Wei-Chung Liu and Pei-Jen Lee Shaner
<b>Time</b>	14:10-17:00, Wednesday
<b>Place</b>	TIGP building room 204, AS
<b>Prerequisites</b>	None
<b>Description</b>	This course aims to provide students tools for analyzing biological datasets and hypothesis testing. After this course, the students should have a firm understanding of statistical methodology used in biology in general.
<b>Objectives</b>	<ol style="list-style-type: none"> <li>1. Lectures are designed to provide students statistical tools for analyzing biological datasets.</li> <li>2. Students will apply the methodologies learned in lectures to aid their research.</li> </ol>
<b>Grade</b>	Assignment 30% Mid-term 35% Final 35%
<b>Reference</b>	Moore D. 1996. <i>Statistics: concepts and controversies</i> . W H Freeman & Co (Sd). Sokal R.R. and Rohlf F.J. 2011. <i>Biometry</i> . W H Freeman.

<b>Date</b>	<b>Topic</b>
9/11	<b>Week 1</b> Introduction to biostatistics.
9/18	<b>Week 2</b> Collecting and handling data in biology.
9/25	<b>Week 3</b> Descriptive statistics.
10/2	<b>Week 4</b> Probability.
10/9	<b>Week 5</b> Probability distributions.
10/16	<b>Week 6</b> Sampling distribution.
10/23	<b>Week 7</b> Introduction to hypothesis testing.
10/30	<b>Week 8</b> One-sample and two-sample t test.
11/6	<b>Week 9</b> Mid-term exam.

11/13	<b>Week 10</b> Analysis of variance I.
11/20	<b>Week 11</b> Analysis of variance II.
11/27	<b>Week 12</b> Analysis of variance III.
12/4	<b>Week 13</b> Regression and correlation I.
12/11	<b>Week 14</b> Regression and correlation II.
12/18	<b>Week 15</b> Analysis of frequencies I.
12/25	<b>Week 16</b> Analysis of frequencies II.
1/1	<b>Week 17</b> Introduction to nonparametric statistics.
1/8	<b>Week 18</b> End-of term exam.