## **Course Outline**

## 585.729.81.FA22 - Cell & Tissue Engineering

This outline provides an overview of the course and assignments by week. Please remember to check the calendar for specific due dates.

Each course module runs for a period of seven (7) days, i.e., one week. Due dates for quizzes, assignments, etc. are referred to by the day of the module week in which they are due. Module weeks begin on Wednesday.

Module	Dates	Module Title	Assignments Due
Module 1 Drummond	Wed 8/31/22– Tues 9/06/22	The Challenge - Repairing the Human Body	<ul><li>Introductions Discussion Forum</li><li>Module 1 Discussion</li></ul>
Module 2 Voycheck	Wed 9/7/22– Tues 9/13/22	Quantum Information Processing and Genetic Engineering	<ul><li>Module 2 Discussion</li><li>Module 2 Assignment</li><li>Module 2 Self-Check Quiz</li></ul>
Module 3 Voycheck	Wed 9/14/22– Tues 9/20/22	Cellular Dynamics and High Throughput Biological Data	<ul><li>Module 3 Discussion</li><li>Module 3 Assignment</li><li>Module 3 Self-Check Quiz</li></ul>
Module 4 Voycheck	Wed 9/21/22– Tues 9/27/22	Tissue Organization and Dynamics	<ul> <li>Module 4 Discussion</li> <li>Module 4 Assignment</li> <li>Review the Course Project Overview</li> </ul>
Module 5 Voycheck	Wed 9/28/22- Tues 10/4/22	Morphogenesis	<ul><li>Module 5 Discussion</li><li>Module 5 Assignment</li></ul>
Module 6 Voycheck	Wed 10/5/22– Tues 10/11/22	Cell Numbers, Growth and Kinetics	<ul> <li>Module 6 Discussion</li> <li>Module 6 Assignment</li> <li>Module 6 Self-Check Quiz</li> <li>Course Project – Assignment A</li> </ul>
Module 7 Drummond	Wed 10/12/22- Tues 10/18/22	Cell Adhesion and Migration	<ul><li>Module 7 Discussion</li><li>Module 7 Assignment</li><li>Course Project – Assignment B</li></ul>
Module 8 Nyberg	Wed 10/19/22– Tues 10/25/22	Cell and Tissue Mechanics	<ul> <li>Module 8 Discussion</li> <li>Module 8 Assignment</li> <li>Course Project – Assignment C (started this week)</li> </ul>
<b>Module 9</b> Nyberg	Wed 10/26/22- Tues 11/1/22	Cell Trafficking and Molecular Transport	<ul> <li>Module 9 Discussion</li> <li>Module 9 Assignment</li> <li>Course Project – Assignment C (completed this week)</li> </ul>



Module	Dates	Module Title	Assignments Due
<b>Module 10</b>	Wed 11/2/22–	Biomaterials and Host	<ul> <li>Module 10 Discussion</li> <li>Module 10 Assignment</li> <li>Course Project – Assignment D</li> </ul>
Nyberg	Tues 11/8/22	Integration	
Module 11	Wed 11/9/22–	Stem Cells	<ul> <li>Module 11 Discussion</li> <li>Module 11 Assignment</li> <li>Course Project – Assignment E</li></ul>
Nyberg	Tues 11/15/22		(Due at the end of module 12)
<b>Module 12</b> Nyberg	Wed 11/16/22– Tues 11/22/22	Tissue Engineered Cartilage, Bone, Skin and Nerve	<ul> <li>Module 12 Discussion</li> <li>Module 12 Assignment</li> <li>Course Project – Assignment E (Started last week)</li> </ul>
	Wed 11/23/22 – Tues 11/29/22	Thanksgiving Break	
Module 13	Wed 11/30/22–	Artificial Organs	<ul> <li>Module 13 Discussion</li> <li>Course Project – Final Report</li></ul>
Nyberg	Tues 12/6/22		and Presentation Due
<b>Module 14</b> Drummond/Nyberg	Wed 12/7/22 –	Final Projects &	<ul> <li>Final Exam</li> <li>Exit Survey</li> <li>Discussion of Project</li></ul>
	Tues 12/13/22	Semester Wrap-up	Presentations <li>Course Take-Away Discussion</li>

