

교과목명	고분자공학	교수명	김대수
교과목 개요	<p>This lecture will cover</p> <ul style="list-style-type: none"> - fundamental knowledge and concepts on polymer engineering <ul style="list-style-type: none"> - solid state properties of polymers - how physical properties of polymers are related to their physical and chemical structures - what methods are used to measure the physical properties of polymers <ul style="list-style-type: none"> - fundamental polymer processing technologies - viscoelasticity of polymers and rubber elasticity 		
학습 목표	<ul style="list-style-type: none"> - To understand fundamentals on polymer engineering - To understand physical properties of polymers and how to measure them <ul style="list-style-type: none"> - To understand fundamentals on polymer processing - To understand viscoelasticity of polymers and rubber elasticity <ul style="list-style-type: none"> - To carry out a term project on polymer engineering 		
주차별 수업계획서(플립러닝 적용 및 교수-학습 활동)			
주별	수업내용		
1주	Introduction to solid state properties of polymers, Amorphous state		
2주	Crystalline state		
3주	Crystalline of polymer melts, crystallinity of polymers		
4주	Polymers' Tg & Tm measurements		
5주	factors affecting Tg of polymers		
6주	Mechanical properties of polymers		
7주	transient test and characterization of polymers		
8주	processing operations of polymers		
9주	rheology, simple flow, extrusion modeling		
10주	viscoelasticity of polymers, dynamic mechanical analysis (DMA)		
11주	torsional brade analysis (TBA), DMA, viscoelastic models		
12주	viscoelastic models, dielectric analysis (DEA), temperature modulated dynamic scanning calorimetry (MDSC)		
13주	time-temperature superposition (TTS) and Boltzmann superposition principle, rubber elasticity		