

화학공학의 역사  
(영미의 화학공학)

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# Manchester Technical School

- 12 lectures on chemical engineering were presented by George Davis in 1887.
- This chemical engineering course was organized around individual chemical operations, later called “unit operations”.
- He was a alkali inspector, given plant access to monitor pollution levels of Lead chamber, Solvay, and Le Blanc processes.
- He proposed the formation of Society of Chemical Engineers in 1880.

# George Davis

- Hand book of chemical engineering was published by him in 1901.
- Pilot plant concept was stressed as the value of large scale experimentation.
- He defined the modern chemical engineering profession in many ways.
- His lecture was considered as English know-how because of empirically explained operating practices.

# MIT

- Lewis Norton at chemistry department of MIT made 4 year batchelors program in chemical engineering entitled "course X(ten)" in 1888.
- A combination of mechanical engineering and industrial chemistry with emphasis on engineering was offered
- In 1920, MIT gained an independent chemical engineering department.

# Pensylvania and Tulane

- University of Pensylvania became the second school to offer a four-year degree in chemical engineering in 1892, and focus on mechanical engineering even though the degree sprang from from the chemistry department.
- Tulane university in 1984 became the first Southern school, and the third in US.

# 독일의 화학공학

- 미국이 스케일업 연구를 위해 화학공학과를 화학과에서 독립시켜 만든 반면, 독일은 화학자와 기계공학자가 팀을 이루어 스케일업 연구를 수행하였다.
- 독일의 화학공업은 염료위주의 정밀화학공업으로 반응이 주로 회분식이어서 복잡한 공학적 문제가 적은 반면, 미국의 화학공업은 산 알칼리 공업으로 소품종 대량생산을 위한 연속공정의 공학적 접근법이 필요하였다.

# Unit Operation Concept

- Arthur D. Little of MIT stressed the importance of unit operations of chemical industry and standardized the chemical engineering education by unit operation course in 1915.
- Unit operations became a convenient manner of organizing chemical engineering knowledge.
- 14 schools of chemical engineering in US were accredited by AIChE in 1925.