**Nazwa przedmiotu:**

History of Technology

**Koordynator przedmiotu:**

Prof. Michał Kopczyński

**Status przedmiotu:**

Obowiązkowy

**Poziom kształcenia:**

Studia I stopnia

**Program:**

Electric and Hybrid Vehicles Engineering

**Grupa przedmiotów:**

Przedmioty HES

**Kod przedmiotu:**

1150-00000-ISA-0111

**Semestr nominalny:**

1 / rok ak. 2022/2023

**Liczba punktów ECTS:**

1

**Liczba godzin pracy studenta związanych z osiągnięciem efektów uczenia się:**

1) Total amount of contact hours - 14 hours
 a. lecutres - 14 hours
 b. consultations - 1 hour
2) Student's independent work - 10 hours

3) TOTAL - 25 hours

**Liczba punktów ECTS na zajęciach wymagających bezpośredniego udziału nauczycieli akademickich:**

…1 ECTS point - 15 include:
a) lecturs - 14 hours
 consultations - 1 hour

**Język prowadzenia zajęć:**

angielski

**Liczba punktów ECTS, którą student uzyskuje w ramach zajęć o charakterze praktycznym:**

brak

**Formy zajęć i ich wymiar w semestrze:**

|  |  |
| --- | --- |
| Wykład:  | 15h |
| Ćwiczenia:  | 0h |
| Laboratorium:  | 0h |
| Projekt:  | 0h |
| Lekcje komputerowe:  | 0h |

**Wymagania wstępne:**

brak

**Limit liczby studentów:**

zgodnie z zarządzeniem Rektora PW

**Cel przedmiotu:**

The purpose of the course is to acquaint participants with basic facts in the history of technology of the last three centuries. The course begins with a short introduction into the methodology of history of technology, than lectures are devoted to the development of heat engines and communication. The last lecture describes the rise of the automotive industry in the first half of the 20th century.

**Treści kształcenia:**

1. History of technology: Basic definitions
2. The supply of energy before and after the Industrial Revolution
3. James Watt, or pros and cons of the Age of Steam
4. George Stephenson and the development of the railways
5. The twilight of the age Age of Sail and the development of steam propelled ships.
6. From guns to motor vehicles: the American System of Manufacture.
7. All highways lead to Rome, or a short history of road-building.
8. Ford vs. Sloan or the birth of automotive industry.

**Metody oceny:**

Homework: each student Has to summarize two scientific articles devoted to history of technology;
Final test to verify the knowledge.

**Egzamin:**

nie

**Literatura:**

T.C. Barker, The International History of Motor Transport, ‘Journal of Contemporary History’, vol. 20:1, 1985, pp. 3-19.
John B. Rae, The fabulous Billy Durant, ‘Business History Review’, vol. 32, 1958, pp. 255-271.
Lynwood Bryant, The Silent Otto, ‘Technology and Culture’, vol. 7:2, pp. 184-200
Rudi Volti, A Century of Automobility, ‘Technology and Culture’, vol. 37:4, 1996, pp. 663-685
F.M.L. Thompson, Nineteenth Century Horse Sense, ‘Economic History Review’, vol. 29:1, pp. 60-81
I.B. Holley jr., Blacktop. How Aphalt Paving Came to the Urban United States, ‘Technology and Culture’, vol. 44:4, 2003, pp. 703-733
John Joseph Murphy, Entrepreneurship in the Establishment of the American Clock Industry, ‘Journal of Economic History’, vol. 26:2, pp. 169-186.
Carolyn S. Cooper, The Portsmouth System of Manufacture, ‘Technology and Culture’, vol. 25:2, pp. 182-225.
John E. Sawyer, The Social Basis of the American System of Manufactures, ‘Journal of Economic History’, vol. 14:4, 1954, pp. 361-379.
Gerald S. Graham, The Ascendancy of the Sailing Ship 1850-1885, ‘Economic History Review’, vol. 9:1, pp. 74-88
David M. Williams, John Armstrong, Changing Voyage Patterns in the Nineteenth Century: The Impact of Steamship, ‘International Journal of Maritime History’, vol. 22:2, 2010, pp. 151-170
John Giese, What is Railway? ‘Technology and Culture’, vol. 1:1, 1959, pp. 68-77.
Francis T. Evans, Roads, Railways, and Canals: Technical Choices in 19th century Britain, ‘Technology and Culture’, vol. 22:1, pp. 1-34
J. Kanefsky, J. Robey, Steam Engines in 18th century Britain: A Quantitative Asessement, “Technology and Culture”, vol. 21:2, 1980, pp. 161-186
Mary B. Rose, Social policy and business: parish apprenticeship and the early factory system 1750-1834, “Business History”, vol. 10, 1989, pp. 5-32.
Peter Kirby, Child labour in Britain, 1750-1870, New York 2003, pp. 51-92
E.A.Wrigley, The supply of raw materials in the Industrial Revolution, “The Economic History Review”, vol. 15, 1962 pp. 1-16
Thomas Branstetter, ‘The Most Wonderful Piece of Machinery the World Can Boast of’: The Water-works at Marly, 1680-1830, “History and Technology”, vol. 21:2, 2005, pp. 205-220.

**Witryna www przedmiotu:**

brak

**Uwagi:**

brak

## Efekty przedmiotowe

### Profil ogólnoakademicki - kompetencje społeczne

**Efekt Wpisz opis:**

Student uderstands social consequences of engineering.

Weryfikacja:

Final test

**Powiązane efekty kierunkowe:** K\_K02, K\_K06

**Powiązane efekty obszarowe:** T1A\_K02, T1A\_K07