

**GDYNIA MARITIME UNIVERSITY**  
**Academic year 2025/2026**  
**Faculty of Navigation**  
**Transport**  
**Erasmus Faculty Coordinator - Przemysław Wilczyński**  
**Courses in English**

**Semester II (Summer) ECTS 10**

| <b>Code</b> | <b>Name</b>               | <b>Description/Content</b>   | <b>ECTS</b> | <b>Teacher's name</b>         |
|-------------|---------------------------|--|-------------|-------------------------------|
| 1.          | English                   | General English and elements of business English.  | 2           | mgr Bożena Forys              |
| 2.          | Mathematics               | Multidimensional mathematical analysis: differential calculus of functions of several variables, multiple integrals. Sequences, numerical and function series. Spherical trigonometry. Elements of probability calculus. | 6           | dr Sambor Guze                |
| 3.          | Transport infrastructures | Road, railroad construction aggregates, materials for transport infrastructure   | 2           | dr inż. Aleksandra Wawrzyńska |

**Semester III (Winter) ECTS 10**

| <b>Code</b> | <b>Name</b>                 | <b>Description/Content</b>   | <b>ECTS</b> | <b>Teacher's name</b>         |
|-------------|-----------------------------|--|-------------|-------------------------------|
| 1.          | English                     | General English. Maritime English- Modes of Transport. Types of Ships. Types of Cargo.   | 2           | mgr Bożena Forys              |
| 2.          | Transport infrastructure    | Presentation of the main characteristics and parameters of the transport infrastructure. Indication of the modal specific concern infrastructure. The state-of-art and future development plans of the European transport infrastructure. The financial aspects of the infrastructure development (incl. national budget structure, PPP, European Funds assistance). | 4           | dr inż. Aleksandra Wawrzyńska |
| 3.          | Means of Transport          | Elements highway engineering, vehicles and buildings. Railway transport, rolling stock: vehicles and wagons. Air transport engineering: airports, airways, runways, air crafts. Instrument Landing Systems. IATA and ICAO code. Air containers. Pipelines transport. Gas and petroleum pipelines.  | 2           | dr inż. Aleksandra Wawrzyńska |
| 4.          | Organization and management | Management of the organization as a form of control. Control, management, leadership, governance, management, administration. Power steering. Management styles. Leadership. The difference between managers and the contractors. Planning as a function of management. Strategic management of organization. Marketing management.                                  | 2           | dr Adam Salomon               |

**Semester IV (Summer) ECTS 14**

| Code | Name                      | Description/Content   | ECTS | Teacher's name                              |
|------|---------------------------|---|------|---|
| 1.   | English                   | General English. Maritime English- Sea Transport. Packing. Containerization. Cargo Damage.  | 3    | mgr Bożena Forys                            |
| 2.   | Transport Economics       | The economic nature and character of transport processes. Transport costs and charging schemas for transport services.  | 2    | mgr inż. Ewelina Ziajka                     |
| 3.   | Basic of Statistics       | Descriptive statistics: simple and cumulative series, histogram, mean value, variance, standard deviation, median, quantiles, mode, simple and central moments. Estimation problem: point estimation, interval estimation of parameters, confidence intervals for mean value, variance and proportion. Parametric tests: critical domain, test for mean value, variance and proportion, test for two samples: test for two mean values, two variances and two proportions. Nonparametric tests: Pearson's chi-squared test, chi-square test for independence, serial test for randomness. Correlation and regression analysis: linear and nonlinear regression, multiple regression, estimation of correlation and regression coefficients. Investigation of trend and stability of stochastic process. Time series. (general information). | 2    | dr hab. Sambor Guze                         |
| 4.   | Transport Infrastructures | Infrastructure of maritime transport.   | 5    | dr inż. Aleksandra Wawrzyńska               |
| 5.   | Logistics                 | The definition, origin and main characteristics of logistics. Basic rules and kinds of logistics systems. Logistics of delivery, production and distribution, main challenges and solutions. Spatial planning of logistics systems location and development. Characteristics and management of the integrated logistics chains/networks. The role of transport in logistics management.   | 2    | dr Adam Salomon,<br>mgr inż. Ewelina Ziajka |

**Semester V (Winter) ECTS 12**

| <b>Code</b> | <b>Name</b>             | <b>Description/Content</b>   | <b>ECTS</b> | <b>Teacher's name</b>         |
|-------------|-------------------------|--|-------------|-------------------------------|
| 1.          | English                 | General English. Maritime English- Cargo Operations in Ports. Loading and Discharging.   | 4           | mgr Bożena Forys              |
| 2.          | Fundamentals of traffic | Main tasks of traffic engineering for road transport   | 2           | dr inż. Aleksandra Wawrzyńska |
| 3.          | Transport systems       | Transport systems in the theory of systems. Transport policy in Poland and the European Union. Subsystem for road transport. Road passenger and freight transport. Subsystem of railway transport. Inland waterway transport subsystem. Inland vessels and equipment; Subsystem of maritime transport. Subsystem of air transport. Multimodal transport systems. | 3           | dr inż. Aleksandra Wawrzyńska |
| 4.          | Transport Telematics    | Basics of telematics in transport.   | 3           | dr inż. Aleksandra Wawrzyńska |

**Semester VI (Summer) ECTS 16**

| <b>Code</b> | <b>Name</b>  | <b>Description/Content</b>   | <b>ECTS</b> | <b>Teacher's name</b>         |
|-------------|--|--|-------------|-------------------------------|
| 1.          | Means of internal transport                          | Characteristics and parameters of the internal transport.  | 4           | dr inż. Aleksandra Wawrzyńska |
| 2.          | Fundamentals of Traffic Engineering                  | Main tasks of traffic engineering, characteristics of canals and fairways, port approaches & harbours, VTS functioning.  | 3           | dr inż. Aleksandra Wawrzyńska |
| 3.          | Reliability and safety of the transportation systems | Basic concepts and characteristics of the reliability of non-renewable multi-state objects. Multi-state reliability function, mean lifetime of the system in the subset of reliability states, variance and standard deviation of the system in the subset of reliability states Safety of technical systems. Risk function and safety analysis of transportation port and shipbuilding systems. | 4           | dr hab. Sambor Guze           |
| 4.          | Forwarding   | The role of the freight forwarding in the contemporary international trade. Influence of customs of trade for the work of the forwarder.   | 5           | dr Adam Salomon               |