

TU/enable

Course Brochure

2024-2025

TU/enable is a student-initiative aimed at students with a refugee background who are currently waiting for their status or have recently received their status. Do you have an academic background and are you seeking to actively maintain and develop your current knowledge and skills in preparation for a smooth integration in the Dutch education- and labour market?

TU/enable offers newcomers a chance to participate in a selection of regular undergraduate courses for free, providing you with your first experience in a Dutch university. Upon completion of the course, a testimonium can be obtained.

An aerial photograph of a modern university building with a glass facade, illuminated from within, set against a sunset sky. The building is surrounded by greenery and other city buildings in the background.

Eindhoven, February 16, 2025

Frequently asked questions

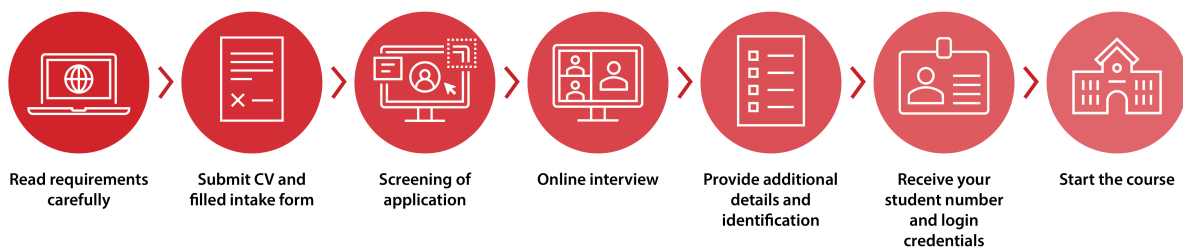
What is required for me to participate in one of the courses on offer?

In order for you to participate in, you are required to understand and speak (academic) English (at least level B2/C1). Participants are expected to have a level of education which is equivalent to at least the Dutch 'VWO-diploma' (secondary school) or to have prior academic experience. Moreover, availability and intrinsic motivation are also prerequisites.

How do I apply for one of the courses on offer?

Simply download and fill in our intake form (see Downloads), and send it to TUenable@tue.nl, together with your CV. We will then get back to you as soon as possible. If you are not sure if TU/enable is something for you, you can also send an e-mail asking for more information or an exploratory meeting.

Application process:



How much time will each course take me?

Each course is taught over a time period of eight weeks. These eight weeks consist of lectures and assignments (if applicable), after which an exam is conducted in the two weeks after that. Each course is expected to cost you approximately 140 hours throughout those 8-10 weeks, consisting of lectures, time spent on assignments (if applicable) and preparation time for the exam. This means that you require roughly 14 hours per course per week.

Which courses are on offer?

In the table below you can find TU/Eindhoven courses that are open for TU/enable students. These courses are taught in a specific quartile in the academic year*. All offered courses are regular undergraduate courses of the Industrial Engineering faculty, the Electrical Engineering faculty or the Industrial Design faculty of which the lecturers have agreed to open their courses to students with a refugee background. More information on the offered courses can be found in the brochure through the download link on the right.

There is a possibility of participating in a more advanced course, in case of very well completing a course listed below. This will be in careful consultation with us.

* A course is taught in a specific quartile of the academic year. This means that you can only participate in this course during that particular quartile. Thus, a course is bound to a specific quartile.

Can TU/enable support me with books or travelling expenses?

TU/enable will try to make sure that students have access to the necessary study material. However, for some courses, the study material is provided by the responsible lecturer. Thus, books are not always necessary. As for travelling expenses, we are no longer able to fund travel costs. Therefore you MUST live within a one hour radius of the TU/e in order to apply

Courses on offer

Below you can find all the courses that we offer this academic year. The courses are listed per quartile, which is the period in which you can participate in a specific course. There is a possibility of participating in a more advanced course, in case of very well completing a course listed below. This will be in careful consultation with us.

Quartile 1

2 September 2024 - 8 November 2024

Application deadline: Monday 12 August 2024

Course Code	Course Name	Department	Lecturer	Page
0LEUA0	Decisions under Risk and Uncertainty	Industrial Engineering & Innovation Sciences	dr. P.J. Nickel	4
1JK00	Management of Human Behavior in Organizations (Non IE)	Industrial Engineering & Innovation Sciences	Leander van der Meij	4
1JP00	Work & Organizational Psychology for Premasters	Industrial Engineering & Innovation Sciences	Ad Kleingeld	5
2IT60	Logic and Set Theory	Mathematics and Computer Science	Bas Lutтик	5
2WAB0	Calculus Variant A	Mathematics and Computer Science	Hans Cuypers	6
2WBB0	Calculus Variant B	Mathematics and Computer Science	Hans Cuypers	6

Quartile 2

11 November 2024 - 31 January 2024

Application deadline: Monday 7 October 2024

Course Code	Course Name	Department	Lecturer	Page
0HV30	Social and Environmental Psychology	Industrial Engineering & Innovation Sciences	Peter Ruijten	7
0SV20	From Industrial Ecology to a Circular Economy: Mass Flow Based Concepts	Industrial Engineering & Innovation Sciences	Bart Wesselink	7
1CK40	Intermediate Finance and Accounting	Industrial Engineering & Innovation Sciences	Loe Schlicher	8
1ZEUB0	Introduction to Technology Entrepreneurship	Industrial Engineering & Innovation Sciences	Marcel Bogers	8
2DRR00	Linear Algebra and Applications	Mathematics and Computer Science	Jemima Tabearit	9
5XCA0	Fundamentals of Electronics	Electrical Engineering	Vojkan Vidojkovic	9
6BBR05	Advanced Calculus for CE&C	Chemical Engineering and Chemistry	Georgios Skantzaris	10
DAB150	Introduction to Business Design	Industrial Design	Jim Steenbakkens	10

Quartile 3

3 February 2024 - 18 April 2024

Application deadline: Friday 16 December 2024

Course Code	Course Name	Department	Lecturer	Page
1BV00	Fundamentals of Business Information Systems	Industrial Engineering & Innovation Sciences	Sybren de Kinderen	11
1CV10	Introduction to Financial and Management Accounting	Industrial Engineering & Innovation Sciences	Lijia Tan	11
7W9X0	Transportation Engineering	Built Environment	Peter van der Waerden	12

Quartile 4

24 April 2025 – 4 July 2025

Application deadline: Friday 14 March 2025

Course Code	Course Name	Department	Lecturer	Page
1ZV50	Fundamentals of Product Innovation	Industrial Engineering & Innovation Sciences	Viktor Sihag	13
7AS1B10	Structure & Architecture	Built Environment	ir. J.P.A. Schevers	13
DCB210	Intercultural Design	Industrial Design	Daisy Yoo	14

Quartile 1

Decisions Under Risk and Uncertainty (0LEUA0)

Offered by: Industrial Engineering & Innovation Sciences – Philosophy & Ethics

Lecturers: V. Sikimić Dr. C.A. Zednik Prof. Dr. W.N. Houkes

Requirements:

Description:

Many complex issues in engineering involve decision making under risk and uncertainty, whether by managers, technology users, or engineers themselves. In this challenge-based learning course, students specify a problem involving decisions under risk and uncertainty, originating from real-life stakeholders. Examples include resolving managers' questions about the safety of an innovative process chemical installation, designing a contact-tracing software application that is compatible with privacy, and choosing a strategy for designing automobile traffic flows in the Eindhoven region. Students are presented with a problem at the beginning of the course, and work in teams to specify the problem further and communicate it to the stakeholder in a presentation at the end of the course. Students will continue to work on this problem throughout the course sequence. The emphasis is on developing scientifically well-grounded arguments and exploring different perspectives on the topic.

Examination

- Group Assignment (Final Examination) – 60%, minimum grade 5.0
- Individual Student's Portfolio (Interim Examination) – 40%

Additional Information

Last examination year: 2025

Management of Human Behavior in Organizations (1JK00)

Offered by: Industrial Engineering & Innovation Sciences - Human Performance Management

Lecturer: Dr. L. van der Meij

Requirements: Must not have completed Fundamentals of WOP (1JV00)

Description:

This course explores the human factor in organizations, focusing on psychological processes that impact workplace behavior, decision-making, and collaboration. It is designed for students interested in understanding work motivation, leadership, communication, decision-making, and teamwork. Students will analyze real-world scenarios, critically assess organizational psychology theories, and apply concepts to personal or professional experiences.

Examination:

- Case Report (Interim Examination) – 30%
- Quiz (Interim Examination) – 6%
- Workshop Exercise (Interim Examination) – 10%
- Final Examination (STEP ANS Multiple Choice) – 54% (Minimum grade 5.0)

Additional Information:

Required Book: Robbins, S.P., Judge, T.A., & Campbell, T.T. (2017). Organizational Behavior, 2nd European Edition, Pearson. ISBN: 978-12-920-1655-9

Fundamentals of Work and Organizational Psychology for Premasters (1JP00)

Offered by: Industrial Engineering & Innovation Sciences - Human Performance Management

Lecturers: Dr. Ir. P.A.M. Kleingeld Dr. A.G. Nicolau Dr. P.P.F.M. van de Calseyde

Requirements:

Must not have completed the following courses: 1JK00 or 1JV00

Description:

Competent, motivated, and productive employees are a crucial asset for many organizations. This course provides insights into the human factor in organizational processes, essential for students in Industrial Engineering, Innovation Management, and Operations Management.

The course is divided into three blocks covering different aspects:

Block 1: Foundations of W&O Psychology – Covers core methods, personnel selection, job performance, training, and motivation.

Block 2: Workplace Dynamics & Leadership – Examines attitudes, stress, leadership, decision-making, teams, and diversity.

Block 3: Organizational Structures & Change – Focuses on organizational structure, culture, and change management.

Examination

- Written Examination (Final) – 100%
- Multiple-choice questions, including case-based questions

Logic and Set Theory (2IT60)

Offered by: Mathematics and Computer Science - Computer Science Domain

Lecturers: Dr. C.J. Bloo Dr. S.P. Luttik (Responsible Lecturer, Subject Matter Expert)

Requirements: Must not have completed: 2ITS60 or 2WF40

Description:

Logical reasoning is essential for formulating precise solutions to complex technical problems. This course introduces propositional and predicate logic, covering key concepts such as truth tables, tautologies, contradictions, logical consequence, and quantifiers. Students will learn to work with set theory, including operations on sets, functions, relations, and orderings. The course emphasizes mathematical proof techniques, including mathematical induction, and equips students with the skills to present logical arguments in a structured and clear manner. The ability to prove and refute statements, understand logical deductions, and manipulate formulas rigorously will be developed throughout the course.

Examination:

- Weekly Tests (Best 5 counted) – 30%
- Written Examination (Final) – 70% (Minimum grade 6.0, 180 min)
- The final grade cannot exceed 5 if the final exam score is below 5.0

Additional Information:

Recommended Book: Rob Nederpelt, Fairouz Kamareddine, *Logical Reasoning: A First Course*, Texts in Computing, Volume 3, King's College Publications, Second Revised Edition, 2011

Calculus Variant 1 (2WAB0)

Offered by: Mathematics and Computer Science - Mathematics Domain

Lecturers: Prof. Dr. F.G.M.T. Cuypers Dr. Ir. M.J.H. Anthonissen Dr. Ir. S. Dommers

Requirements:

Description:

Mathematics serves as the foundation for technical sciences, enabling precise descriptions of physical phenomena and problem-solving through analytical methods. This course provides essential mathematical tools, covering algebraic manipulation, limits, differentiation, integration, and vector analysis. Students will develop proficiency in solving inequalities, working with trigonometric, exponential, and logarithmic functions, computing limits, and analyzing continuity. The course further explores differentiation techniques, Taylor polynomials, L'Hôpital's rule, definite and improper integrals, first-order differential equations, and vector geometry in two and three dimensions. These concepts form the mathematical basis for engineering applications such as modeling waves, optimizing system parameters, and computing centers of gravity.

Examination:

- Midterm Test – 10% (40 min)
- Online Weekly Tests (Homework) – 10%
- Start Test (Interim Examination) – 0% (Diagnostic, 60 min)
- Written Exam (Final) – 70% (Minimum grade 5.0)

Additional Information:

Recommended Book: Robert T. Smith, Roland B. Minton, Ziad A.T. Rafti, *Calculus, Early Transcendental Functions*, McGraw-Hill, Fifth Edition with Connect Code ISBN: 9781526869968

Calculus Variant 2 (2WBB0)

Offered by: Mathematics and Computer Science - Mathematics Domain

Lecturers: Prof. Dr. F.G.M.T. Cuypers Dr. B. Baumeier Dr. M.E. Hochstenbach Dr. O.T.C. Tse Dr. Ir. A.S. Tijsseling Prof. Dr. K.P. Veroy-Grepl S. Kapçak

Requirements:

Description:

Mathematics is the fundamental language of technical sciences, enabling the description of physical phenomena and problem-solving in various engineering fields. This course covers essential mathematical techniques such as differentiation, integration, and differential equations, which are crucial for modeling real-world applications. Students will develop algebraic skills, understand limits and continuity, differentiate and integrate functions, and apply calculus to solve engineering problems. Topics include trigonometric, exponential, and logarithmic functions, Taylor series, L'Hôpital's rule, Riemann sums, vector algebra, and first-order differential equations. The course provides a balance between theoretical understanding and practical problem-solving, preparing students for advanced applications in their respective disciplines.

Examination:

- Midterm Test (Interim Examination) – 10% (60 min)
- Online Weekly Tests (Homework) – 10%
- Start Test (Interim Examination) – 0% (Diagnostic)
- Written Examination (Final) – 70% (Minimum grade 5.0)

Additional Information :

Recommended Book: Adams & Essex, *Calculus: A Complete Course*, Pearson, Tenth Edition ISBN: 9780135732588 Ebook ISBN: 9780135766781

Quartile 2

Social and Environmental Psychology (0HV30)

Offered by: Industrial Engineering and Innovation Sciences - Human-Technology Interaction

Lecturers: Dr. Ir. P.A.M. Ruijten-Dodoiu Dr. K. Chamilothori Dr. Ir. A. Haans Prof. Dr. Ir. Y.A.W. de Kort

Requirements:

Not completed Marketing Perspectives on Product Innovation (1ZV20)

Description:

Social and environmental psychology explores how thoughts, feelings, and behaviors of individuals are influenced by others and their surroundings. Social psychologists focus on individual social performance rather than group behaviors, while environmental psychologists examine how people interact with and adapt their environments. This course introduces theories and research in social and environmental psychology, covering topics such as social perception, self-presentation, attitude formation, group behavior, environmental values, and stress perception. The course enhances understanding of psychological theories and their applications to real-world technological and environmental challenges.

Examination:

- Assignment I (Interim Examination) – 15%
- Assignment II (Interim Examination) – 15%
- Written Examination (Final) – 70%

Additional Information:

Required Book: Biswas-Diener, R. (2016). Together: The Science of Social Psychology. Noba Project. Donald, I. (2022). Environmental and Architectural Psychology: The Basics. Routledge.

From Industrial Ecology to a Circular Economy: Mass Flow Based Concepts (0SV20)

Offered by: Industrial Engineering and Innovation Sciences - Technology, Innovation & Society

Lecturers: M. Hauck Dr. K. de Kleijne

Requirements:

Description:

This course explores mass flows at various scales, including natural nutrient cycles, industrial systems, and complete economies. Topics include industrial ecology, circular economy, ecological footprints, depletion, and national mass flow accounting. Students will learn to apply analysis tools like mass flow analysis, embodied energy, and life cycle analysis to understand and mitigate environmental impacts. The course combines theoretical learning with practical applications, including industry discussions.

Examination:

- Assignment from Industrial Ecology (Interim Examination) – 40%
- Progression Tests (Interim Examination) – 10%
- Written Examination using Notebook (Final) – 50%

Additional Information:

Recommended Book: M.F. Ashby (2021). Materials and the Environment (Third Edition). eBook available in library. ISBN: 9780123859716

Intermediate Finance and Accounting (1CK40)

Offered by: Industrial Engineering and Innovation Sciences - Operations Planning Accounting and Control

Lecturers: dr.ir. L.P.J. Schlicher C. Drent, MSc dr. A.J. van Beek

Requirements:

Completed Fundamentals of Finance and Management Accounting (1CV10)

Description:

This course focuses on financial analysis and decision-making. Students will learn to create and analyze cash flow statements, compute financial ratios, and evaluate cash flow streams using net present value and internal rate of return. Additional topics include the valuation of fixed income securities, firm valuation, capital budgeting, risk management with financial options, and portfolio optimization through the mean-variance model and capital asset pricing model.

Students will work on two group assignments that tackle real-world business problems, emphasizing quantitative financial methods.

Examination:

- Group Assignment 1 (Interim Examination) – 15%
- Group Assignment 2 (Interim Examination) – 15%
- Written Examination (Final) – 70%

Additional Information:

Required Books: David Luenberger (International Edition). Investment Science. Oxford University Press. ISBN: 9780195391060

Peter Atrill, Eddie McLaney (10th Edition). Financial Accounting for Decision-Makers. Prentice-Hall. ISBN: 9781292251257

Introduction to Technology Entrepreneurship (1ZEUB0)

Offered by: Industrial Engineering and Innovation Sciences - Innovation, Technology Entrepreneurship & Marketing

Lecturers: Prof.dr.ir. M.L.A.M. Bogers J.J.J. van den Hout, PDEng

Requirements:

Description:

This course introduces students to entrepreneurship for high-tech products and services. It focuses on creating and evaluating entrepreneurial opportunities and designing business models, recognizing key challenges in new business development. The course covers:

- Entrepreneurial opportunity creation and evaluation
- Business model design for high-tech products and services
- Entrepreneurial marketing and finance
- Systematic business development

Examination:

- Experiment (Interim Examination) – 25%
- Group Assignment (Interim Examination) – 25%
- Written Examination (Final) – 50%

Additional Information:

Linear Algebra and Applications (2DRR00)

Offered by: Mathematics and Computer Science - Computer Science domain

Lecturers: dr. M.E. Hochstenbach J.M. Tabcart

Requirements:

Must not have completed Linear Algebra and Applications (2DBI00), Linear Algebra 1 (2WF20), or Linear Algebra for Data Science (JBM070)

Description:

This course covers fundamental and advanced concepts in linear algebra with a focus on real-world applications, including: - Matrix and vector operations, norms, and angles

- Gaussian elimination and solving linear systems
- Least squares problems and data fitting
- Eigenvalue decomposition and Google PageRank
- Singular value decomposition (SVD) and its applications in web analytics and data mining
- Implementing linear algebra methods using Python, Julia, Matlab, or another language

Examination:

- Group Work Assignment (Interim Examination) – 20%
- Homework Assignment on Laptop (Interim Examination) – 20%
- Written Examination (Final) – 60%

Additional Information:

Fundamentals of Electronics (5XCA0)

Offered by: Electrical Engineering - Integrated Circuits

Lecturers: dr. V. Vidojkovic dr.ir. M. Fattori prof.dr.ir. E. Cantatore

Requirements:

Description:

This course provides an introduction to analog and digital electronics, focusing on circuit analysis and measurement techniques. Topics include: - DC and sinusoidal analysis of linear circuits

- Frequency behavior and Bode diagrams
- Operational amplifiers and circuit design
- MOSFET transistors and nonlinear behavior
- Combinatorial and sequential circuit design
- Practical hands-on training in circuit design, building, and measurement

The course emphasizes applications in modern electronics, including sensors, actuators, amplifiers, and logic circuits.

Examination:

- Assignment (Interim Examination) – 10%
- Homework Assignment (Interim Examination) – 10%
- Practical / Experiment (Interim Examination) – 10%
- Written Examination (Final) – 70%

Additional Information:

Recommended Material: Neil Storey, Electronics: A Systems Approach*, 6th edition, ISBN 9781292114064

Advanced Calculus for CE&C (6BBR05)

Offered by: Chemical Engineering and Chemistry - Chemical Engineering and Chemistry

Lecturers: G. Skantzaris, MSc

Requirements:

Assumed previous knowledge: Calculus

Description:

This course covers advanced calculus concepts, including: - Complex number representations and computations

- Second-order differential equations
- Functions of multiple variables, including partial derivatives and gradients
- Classification of extrema using Lagrange multipliers
- Double and triple integrals in Cartesian, polar, and spherical coordinates
- Vector fields and integration through curves and surfaces

The course provides theoretical understanding and practical applications, with a strong emphasis on problem-solving.

Examination:

- Digital Test 1 – 20%
- Digital Test 2 – 30%
- Digital Test 3 – 30%
- Digital Test 4 – 20%

Additional Information:

Required Material: Adams, R. A. and Essex, C. (2021).Calculus: A Complete Course. 10th ed. Toronto: Pearson. ISBN: 9780135732588 (9th or 8th edition also sufficient)

Introduction to Business Design (DAB150)

Offered by: Industrial Design - Industrial Design

Lecturers: dr. Y. Lu J.J.H. Steenbakkens, MSc (Contact Person) dr. C.A.L. Valk, MSc

Requirements:

Description:

This course explores the intersection of design and business, focusing on user and market research, technology and intellectual property, branding, and financial structuring. Through case studies, lectures, and assignments, students learn to transform concepts into viable business models, gaining insights into key entrepreneurial strategies.

Examination:

- Deliverables (Final Examination) – 100%

Additional Information:

Required Material: - Bosch-Sijtsema, P., & Bosch, J. (2015).User Involvement throughout the Innovation Process in High-Tech Industries. *Journal of Product Innovation Management*, 32(5), 793-807.

- Pocknell, R., Kelly, M., & Von Schmieder, C.Intellectual Property Strategy.
- Montana, J., Guzman, F., & Moll, I. (2007).Branding and Design Management. *Journal of Marketing Management*, 23(9-10), 829-840.
- Hall, B. H., & Lerner, J. (2010).The Financing of R&D and Innovation. *Handbook of the Economics of Innovation*, 1, 609-639.

Quartile 3

Fundamentals of Business Information Systems (1BV00)

Offered by: Industrial Engineering and Innovation Sciences - Information Systems

Lecturers: S. de Kinderen dr.ir. H. Eshuis

Requirements:

Must not have completed Business Information Systems (2IIC0)

Description:

This course provides a foundation in business information systems, exploring their role in supporting organizational processes and decision-making. Students will learn to model business processes and data, understand how information systems interact with business functions, and develop skills in designing UML data models and BPMN process models. Additionally, the course covers SQL for querying and managing business data.

Examination:

- Group Assignment Data Modelling (Interim Examination) – 15%
- Group Assignment Process Modelling (Interim Examination) – 15%
- Written Examination (Final) – 70%

Additional Information:

Required Material: Laudon, K.C., & Laudon, J.P. (2018). *Essentials of Management Information Systems*, Global Edition, 13th ed.

Fundamentals of Financial and Management Accounting (1CV10)

Offered by: Industrial Engineering and Innovation Sciences - Operations Planning Accounting and Control

Lecturers: dr. L. Tan dr. G.H. van Kollenburg N.M. Maccarini

Requirements:

Description:

This course introduces the principles of financial and management accounting, covering financial reporting, cost analysis, and decision-making techniques. Students will learn fundamental accounting concepts, including double-entry bookkeeping, financial statements, and accounting conventions. Additionally, the course covers cost classification, budgeting, and financial decision-making strategies, equipping students with the skills to analyze financial data and optimize business processes.

Examination:

- Online Test (Interim Examination) – 10%
- Written Examination (Final) – 90%

Additional Information:

Required Material: Wouters, Selto, Hilton, & Maher. (McGraw-Hill). *Cost Management - Strategies for Business Decisions* (International Edition).

Atrill, P., & McLaney, E. (Prentice Hall). *Financial Accounting for Decision Makers* (10th Edition).

Transportation Engineering (7W9X0)

Offered by: The Built Environment - Unit Urban Systems and Real Estate

Lecturers: dr.ing. P.J.H.J. van der Waerden

Requirements:

Description:

This course provides insight into urban infrastructure for slow traffic, public transport, and motorized traffic. It covers key developments in sustainable safety, shared space, and context-sensitive street design. Additionally, students will learn about infrastructure standards, material usage, and traffic density considerations.

The course combines theoretical knowledge with practical applications, emphasizing the design of safer, more comfortable, and sustainable urban road infrastructure. Instruction includes lectures and self-study, addressing both statutory and engineering aspects.

Examination:

- Final Examination – 100%

Additional Information:

Quartile 4

Fundamentals of Product Innovation (1ZV50)

Offered by: Industrial Engineering and Innovation Sciences - Innovation, Technology Entrepreneurship & Marketing

Lecturers: dr.ir. V. Sihag dr. A.A. Alblas K. Patsera

Requirements: Must not have completed Product Innovation Processes (1ZV30)

Description:

This course takes a process-driven approach to product innovation, covering the tactical and operational aspects involved. Students will learn about predevelopment activities such as opportunity identification, idea generation, and selection methods. The course then explores concept development, prototyping, forecasting, and decision-making tools, leading to the final commercialization stage where students analyze product launch strategies.

Assignments will provide hands-on experience with tools like the Analytical Hierarchy Process (AHP), Quality Function Deployment (QFD), TRIZ, and Fault Tree Analysis.

Examination:

- Team Assignment 1 (Interim Examination) – 20%
- Team Assignment 2 (Interim Examination) – 15%
- Team Assignment 3 (Interim Examination) – 15%
- Written Examination (Final) – 50%

Additional Information:

Required Material: Crawford, M. & Di Benedetto, A. (2021). *New Products Management**, 12th Edition, McGraw-Hill. ISBN: 978-1-260-57508-8 (paperback), 9781260590548 (e-book)

Structure & Architecture (7AS1B10)

Offered by: The Built Environment - the Built Environment

Lecturers: ir. J.P.A. Schevers A.J. Steketee dr.ing. M. Gil Pérez dr.ir. S.P.G. Moonen ir. H. Schilperoort

Requirements:

Description:

This course explores the interplay between Structural and Architectural Design, highlighting how material selection and construction methods influence the architectural expression of buildings. Students will design small structures using timber, concrete, and steel, developing an understanding of tectonics, structural schemes, and material properties. Through lectures and hands-on assignments, they will learn how to align structural and architectural qualities, culminating in technically and architecturally motivated detailing.

Examination:

- Assessment 1: Timber (Interim Examination) – 15%
- Assessment 2: Concrete (Interim Examination) – 15%
- Assessment 3: Steel (Interim Examination) – 15%
- Assessment 4: Final Versions (Final Examination) – 55%

Additional Information:

Recommended Material:

- Watts, A. (2019). *Modern Construction Handbook*. TU/e Library
- Ching, F.D.K. (2014). *Building Construction Illustrated*. TU/e Library
- *The Structural Basis of Architecture (Third Edition)* by Sandaker, Eggen, & Cruvellier

Intercultural Design (DCB210)

Offered by: Industrial Design - Industrial Design

Lecturers: D. Yoo, PhD

Requirements:

Description:

This course focuses on developing intercultural competence by exploring theories on cultures, values, and collaboration. Students will cultivate awareness of their own cultural background and its influence on their thinking, designing, and collaborating. The course prepares students for international exchanges, internships, and working in complex, multi-stakeholder environments. Learning activities include readings, discussions, and applying cultural theories to design projects.

Examination:

- Deliverables (Final Examination) – 100%

Additional Information:

Required Material: - Hofstede, G. (1991). **Cultures and Organizations: Software of the Mind**. London: McGraw-Hill
- Van Boeijen, A.G.C. & Zijlstra, I.S.J. (2020). **Culture Sensitive Design: A Guide to Culture in Practice**. BIS Publishers
- Meyer, E. (2014). **The Culture Map: Breaking Through the Invisible Boundaries of Global Business**. Public Affairs