

## Civil Engineering MEng

#### **COURSE DETAILS**

• A level requirements: AAA

• UCAS code: H202

Study mode: Full-time

Length: 4 years

#### **KEY DATES**

Apply by: 29 January 2025

Starts: 22 September 2025

### **Course overview**

Civil engineers are responsible for the design, project management and construction of the physical infrastructure of our society. Our broad-based, vocational programme covers all the required aspects of a civil engineer's education, with an emphasis on applying your learning in context.

#### INTRODUCTION

You will be introduced to the essentials – everything from structural analysis and design, materials, ground engineering, water supply and sanitation, to the digital built environment and its digitisation. You'll also study relevant subjects such as maths, computer-aided drawing and communication skills.

Site visits are integral to the programme, as are various individual and group design exercises, which provide an opportunity for industrial feedback. Our teaching staff offer projects based on their research expertise.

Students are encouraged to gain relevant work experience to enhance their employability by applying for a summer internship or a year placement with an approved company/organisation.

Civil engineering graduates are in great demand and our programme aims to provide the educational base for graduates who demonstrate ingenuity whilst being practical, articulate, numerate, literate, imaginative, versatile, confident and inquisitive.

This programme also has a year abroad option, an incredible opportunity to spend an academic year at one of our partner universities. On the four-year integrated master's programme, you can go abroad either between years two and three (apply in year two), or between years three and four (apply in year three).

#### WHAT YOU'LL LEARN

- All aspects underpinning the field of Civil Engineering
- Hands-on construction experience
- How to undertake research
- Adapting to a busy hands-on industry environment
- · Critical thinking
- Teamwork
- How to present and communicate clearly

#### **ACCREDITATION**

This degree is accredited by the Joint Board of Moderators (JBM) comprising the Institution of Civil Engineers, Institution of Structural Engineers, Institute of Highway Engineers, the Chartered Institution of Highways and Transportation and the Permanent Way Institution on behalf of the Engineering Council for the purposes of fully meeting the academic requirement for registration as a Chartered Engineer (CEng).

### **Course content**

Discover what you'll learn, what you'll study, and how you'll be taught and assessed.

#### **YEAR ONE**

#### **COMPULSORY MODULES**

#### **GEOMECHANICS 1 (CIVE120)**

Credits: 7.5 / Semester: semester 1

The Geotechnical Engineer is responsible for the safe design of how a building or infrastructure asset interacts with the ground. This module introduces students to the role of the Geotechnical Engineer and the fundamental principles and concepts that form the basis of soil mechanics

#### **SOLIDS AND STRUCTURES 1 (ENGG110)**

Credits: 15 / Semester: semester 2

This module aims to introduce students to the fundamental concepts and theory of how engineering structures work to sustain loads. It will also show how stress analysis leads to the design of safer structures. It will also provide students with the means to analyse and design basic structural elements as used in modern engineering structures.

#### **ENERGY SCIENCE (ENGG116)**

Credits: 15 / Semester: semester 2

To develop an understanding of the basic principles of fluid mechanics, the laws of thermodynamics, and an appreciation of how to solve simple engineering problems. To develop skills in performing and reporting simple experiments.

#### **CIVIL AND ARCHITECTURAL ENGINEERING PROJECTS (CIVE162)**

Credits: 30 / Semester: semester 2

This module provides students with an introduction to projects within the built environment, the roles of professional engineers, the professions they will interact with, and the skills required by a professional engineer operating in the built environment

#### **ENGINEERING MATHEMATICS (ENGG198)**

#### Credits: 22.5 / Semester: semester 2

ENGG198 is a Year 1 mathematics module for students of programmes taught in the School of Engineering, e.g. Aerospace, Civil, Architectural, Mechanical, Product Design and Industrial Design Engineering. It is designed to reinforce and build upon A-level (or equivalent) mathematics, providing you with the strong background required in your engineering studies and preparing you for Year 2 mathematics modules.

#### **DIGITAL ENGINEERING (CIVE125)**

#### Credits: 15 / Semester: semester 2

The module introduces both computer programming concepts and surveying of the built environment in engineering contexts. In the first semester, students will study basic programming concepts using MATLAB (or equivalent proprietary software packages) enabling them to write a basic modular program to solve a data analysis problem, which will be transferable to other programming languages. In the second semester, students will explore through personal use the ways construction equipment and digital technologies are used for surveying, inclusive of data recording, survey design and documentation, plus data analysis and interpretation. This work in the second semester will be supplemented by applying Building Information Modelling (BIM) using industry standard software in an applied digital exercise.

Programme details and modules listed are illustrative only and subject to change.

#### **YEAR TWO**

In the second semester students may have the option to take a week-long residential course at the Constructionarium, for which there will be a subsidised charge.

#### **COMPULSORY MODULES**

#### **GEOMECHANICS 2 (CIVE220)**

Credits: 15 / Semester: semester 1

This module introduces students to the theoretical framework of geotechnical engineering. It emphasizes soil as a material and provides an introduction to the application of the theory to practical geotechnical engineering problems including bearing capacity of foundations.

#### **GROUP DESIGN PROJECT (CIVE263)**

#### Credits: 15 / Semester: semester 2

The students are provided with a realistic design brief that needs to be met over the course of the semester. This is achieved via a defined set of realistic work stages which enables the students to produce an open-ended structural design within a group working environment, thus promoting teamwork and industrial awareness. The final deliverable will be the submission of structured design portfolio/sketchbook and oral presentation to academic members of staff and relevant industry partners.

#### **HYDRAULICS (CIVE210)**

#### Credits: 15 / Semester: semester 1

Hydraulics belongs to applied fluid mechanics and covers hydrostatics and hydrodynamics of liquid such as water. The module focuses on pipe flows and open channel flows, which occur in a wide range of science and engineering problems. It is delivered via lectures, laboratory class and tutorials.

#### STRUCTURAL ELEMENT DESIGN (CIVE241)

#### Credits: 15 / Semester: semester 1

This module provides an overview of basic structural design concepts and the application of common materials in construction including steelwork, reinforced concrete (RC), timber, and masonry. It covers fundamental principles and theoretical background and provides design examples based on Eurocodes.

#### **ENVIRONMENTAL PLANNING AND INFRASTRUCTURE PROJECT (CIVE261)**

#### Credits: 15 / Semester: semester 1

This module provides students with an introduction to the contexts of transport and infrastructure, and the skills required by aprofessional engineer operating in this sector.

#### **EXPERIMENTAL METHODS (ENGG201)**

#### Credits: 7.5 / Semester: semester 1

The module focusses on the essentials of data analysis and interpretation, engineering experimentation, measurement techniques and principles of instrumentation.

#### PROGRAMMING FOR CIVIL ENGINEERS (CIVE286)

#### Credits: 7.5 / Semester: semester 2

Students will be introduced to the basic concepts of computer programming and Excel to solve engineering problems. Gain knowledge of basic procedural programming concepts. Become proficient in the use of Excel and Excel Macros. Enhance problem solving skills. Gain experience in solving engineering problems using a software tool.

#### **FLUID MECHANICS (ENGG113)**

#### Credits: 7.5 / Semester: semester 1

This module introduces fluid mechanics to the First Year Undergradute students, describes the fundamental principles of fluid property, dimension analysis, hydrostatics and hydrodynamics. Students will be able to solve simple engineering problems involves steady fluid flow.

Programme details and modules listed are illustrative only and subject to change.

#### **YEAR THREE**

The year three modules are currently being reviewed and will be updated shortly.

#### **COMPULSORY MODULES**

#### **GEOTECHNICAL ENGINEERING (CIVE320)**

Credits: 15 / Semester: semester 1

This module introduces students to the theory and methods that underpin geotechnical engineering practice. It covers the design of shallow and deep foundations, retaining walls, slopes and other structures according to Eurocode 7. In addition, it provides a comprehensive introduction to modern finite element methods and their application to geotechnical engineering.

#### **INDIVIDUAL PROJECT (ENGG341)**

Credits: 30 / Semester: semester 2

The Year 3 individual research project; 300 hours student work over 2 semesters; 3 assessment stages (proposal 5%, interim 20%, final 75%).

#### **SUSTAINABLE WATER ENGINEERING (CIVE316)**

Credits: 15 / Semester: semester 1

In the face of growing populations, increasing demand from agriculture and industry, unsustainable use of water reserves and on going environmental change, water engineers face enormous challenges. This module will study the natural water systems, which underpin our use of water resource. Furthermore, it will apply fundamental hydraulic principles to predict flood risks, estimate water demand and supply, design and optimise water storage, transfer and supply infrastructure as well as set out the basic principles and practical measures to deal with these challenges.

#### **OLD STRUCTURES OF STEEL, TIMBER AND MASONRY (CIVE334)**

#### Credits: 15 / Semester: semester 2

It has been shown that the refurbishment of existing buildings is a more sustainable option than demolition and reconstruction as it leads to significant reductions in CO2 emissions. Additionally, the benefits of refurbishment (in comparison to new construction) extend beyond CO2 emissions and reduced energy expenditure: (i) less raw materials, (ii) less waste, (iii) heritage conservation and community retention and finally, (iv) well restored structures have a high economic value. This module gives students an insight into the structural appraisal and reuse of existing structures.

#### SUSTAINABLE DESIGN AND CONSTRUCTION MANAGEMENT (CIVE350)

#### Credits: 15 / Semester: semester 2

Sustainability and Management are areas of professionalism that are very important within the construction industry and wider built environment sector. Both areas are also emerging as new and exciting career paths for many graduate civil engineers plus architectural engineers. On completion of this module, students will understand a range of approaches to designing for climate change adaptation and net-zero carbon implementation, as well as appreciate diverse management practices associated with modern methods of construction plus industry innovation. In addition, skills will be gained by students in career evaluation, market analysis, design appraisal, options review and project judgements, all linked to enhanced graduate employment and responsible decision-making as a professional engineer.

#### **OPTIONAL MODULES**

#### **INTRODUCTION TO FINITE ELEMENTS (ENGG302)**

#### Credits: 7.5 / Semester: semester 1

In this module the students will gain a basic understanding of the Finite Element method and learn to use some Finite Element software. This software will then be used to analyse a variety of different problems which are relevant to both mechanical and civil engineers.

#### **UNCERTAINTY, RELIABILITY AND RISK 1 (ENGG304)**

#### Credits: 7.5 / Semester: semester 1

This module covers broad aspects of uncertainty quantification methods, reliability analysis and risk assessment in engineering applications. It also provides understanding of statistical analysis of engineering data and computational methods for dealing with uncertainty in engineering problems.

#### **STRUCTURAL DYNAMICS (ENGG301)**

#### Credits: 7.5 / Semester: semester 1

This module introduces essential principles necessary for the understanding of vibrations in Civil Engineering structures.

#### **EARTHQUAKE ENGINEERING (CIVE342)**

#### Credits: 7.5 / Semester: semester 1

This module aims at introducing students to earthquake engineering. It acquaints students with basic skills for analyzing the seismic response of structures subjected to earthquake excitations using structural dynamics principles. Background knowledge in engineering seismology will be covered to provide a comprehensive perspective to the topic. Seismic design principles are also introduced to provide a sound understanding of the rationale behind seismic codes.

Programme details and modules listed are illustrative only and subject to change.

#### **YEAR FOUR**

#### **COMPULSORY MODULES**

#### **ADVANCED GEOMECHANICS (CIVE420)**

Credits: 15 / Semester: semester 1

This module introduces students to advanced theories, concepts and methods of modern geomechanics, with emphasis on: – Advanced methods of simulation – Plasticity theory – Stability analysis – Groundwater flow analysis – Constitutive modelling.

#### **CAPSTONE: MULTIDISCIPLINARY PROJECT (CIVE462)**

Credits: 30 / Semester: semester 1

This module presents an opportunity to practise comprehensive, multidisciplinary design in civil engineering. The students work in teams to provide complete solutions to demanding civil engineering design problems with some significant reliance on self, guided learning.

#### **STRUCTURAL SYSTEMS (CIVE405)**

#### Credits: 15 / Semester: semester 1

This module focuses on the conceptual design of civil engineering structures, and structural behaviour and assessment. It provides a review of the basics of structural engineering analysis and design including construction of bending moment and shear force diagrams, cross-sectional analysis, material properties and basic design code requirements.

#### MATERIALS FOR DURABLE AND SUSTAINABLE CONSTRUCTION (CIVE401)

#### Credits: 15 / Semester: semester 1

The aim of the module is to enhance students' knowledge and understanding of the advances made in conventional construction materials and alternative construction materials that have and are currently being developed for use in construction to achieve more innovative, and sustainable structures.

#### **RISK AND UNCERTAINTY: PROBABILITY THEORY (ENGG404)**

#### Credits: 7.5 / Semester: semester 1

This module develops understanding and appreciation of basic probability theory. It involves the quantification of uncertainties in input and models, their implementation, and the evaluation of the associated results in view of decision making. An introduction to numerical concepts will be provided. The methods shown in the module have a general applicability, which is demonstrated by examples and practical applications.

#### **ADVANCED CONSTRUCTION MANAGEMENT (CIVE 450)**

#### Credits: 15 / Semester: semester 2

Management linked to industry innovation and employee practice is an area of professionalism that is very important

within the construction and wider built environment sector. It is also emerging as a distinctive and rewarding career path

for many graduate civil engineers plus architectural engineers. On completion of this module, students will understand a

range of approaches to project management implementation, diverse practices associated with modern methods of

construction, as well as effective judgement-making of challenging tasks in complex real-life situations. It will both prepare

graduates for professional development in civil engineering, as well as make them fully aware of multiple aspects of

strategic, operational and lifecycle management as applied to this specific industrial sector.

#### **STRUCTURAL OPTIMISATION (ENGG414)**

#### Credits: 7.5 / Semester: semester 1

This module is about classical optimisation and modern optimisation and their numerical methods. Structural optimisation and their numerical methods. Students will get an idea of how to optimise simple structure and get optimal solutions by analytical and numerical methods.

#### **OPTIONAL MODULES**

#### **COASTAL AND ESTUARY PROCESSES (CIVE 487)**

Credits: 15 / Semester: semester 1

This module aims to introduce student the basic theory of surface waves, understand the nearshore morphological process and estuary processes.

#### **POLITICS OF THE ENVIRONMENT (ENVS525)**

Credits: 15 / Semester: semester 1

Increasingly recognition of the environmental threats that we all face means that responding to this crisis affects the decisions we all make at a variety of different scales. This module explores the extent to which environmental concerns are taken into account in various decision–making processes involving the public (government), private and third sectors at a variety of different scales, global, European, national and local. The module is assessed by an essay and an open–book exam, which provides students with significant choice to explore those parts of the module they find most interesting.

Programme details and modules listed are illustrative only and subject to change.

#### **HOW YOU'LL LEARN**

We are leading the UK's involvement in the international <u>Conceive-Design-Implement-Operate (CDIO)</u> initiative – an innovative educational framework for producing the next generation of engineers.

Our degree programmes encompass the development of a holistic, systems approach to engineering. Technical knowledge and skills are complemented by a sound appreciation of the life-cycle processes involved in engineering and an awareness of the ethical, safety, environmental, economic, and social considerations involved in practicing as a professional engineer.

You will be taught through a combination of face-to-face teaching in group lectures, laboratory sessions, tutorials, and seminars. Our programmes include a substantial practical component, with an increasing emphasis on project work as you progress through to the final year. You will be supported throughout by an individual academic adviser.

#### **HOW YOU'RE ASSESSED**

Assessment takes many forms, each appropriate to the learning outcomes of the particular module studied. The main modes of assessment are coursework and examination. Depending on the modules taken, you may encounter project work, presentations (individual and/or group), and specific tests or tasks focused on solidifying learning outcomes.

#### LIVERPOOL HALLMARKS

We have a distinctive approach to education, the Liverpool Curriculum Framework, which focuses on research-connected teaching, active learning, and authentic assessment to ensure our students graduate as digitally fluent and confident global citizens.



## Careers and employability

We are committed to developing the modern professional engineers for the future, ensuring that learning environments reflect future working environments. The skills gained through studying a degree in Civil Engineering equip our graduates with the knowledge necessary to excel in an ever-changing industry.

Many graduates have moved on to have careers with employers such as:

- Airbus
- BMI
- British Airways
- Highways Agency
- Jaguar Land Rover
- National Nuclear Laboratory
- Network Rail
- Pilkington
- Rolls Royce
- Siemens.



OF OUR ENGINEERING STUDENTS FIND THEIR MAIN ACTIVITY AFTER GRADUATION MEANINGFUL.

Graduate Outcomes, 2018-19.

## Fees and funding

Your tuition fees, how to pay, and other costs to consider.

#### **TUITION FEES**

UK fees (applies to Channel Islands, Isle of Man and Republic of Ireland)	
Full-time place, per year	£9,250
Year in industry fee	£1,850
Year abroad fee	£1,385

International fees	
Full-time place, per year	£27,200
Year in industry fee	£1,850
Year abroad fee	£13,600

Fees shown are for the academic year 2024/25. Please note that the Year Abroad fee also applies to the Year in China.

Tuition fees cover the cost of your teaching, assessment, operating University facilities such as libraries, IT equipment, and access to academic and personal support.

#### **ADDITIONAL COSTS**

We understand that budgeting for your time at university is important, and we want to make sure you understand any course-related costs that are not covered by your tuition fee. This includes a lab coat, safety boots, and a residential construction course.

Find out more about the <u>additional study costs</u> that may apply to this course.

#### **SCHOLARSHIPS AND BURSARIES**

We offer a range of scholarships and bursaries that could help pay your tuition and living expenses.

We've set the country or region your qualifications are from as United Kingdom. <u>Change it</u> here

•

#### **RIGBY ENTERPRISE AWARD**

Home students

Are you a UK student with a household income of £25,000 or less? If you've participated in an eligible outreach programme, you could be eligible to apply for a Rigby Enterprise Award worth £5,000 per year for three years of your undergraduate degree.

•

#### THE LIVERPOOL BURSARY

Home students

If you're a UK student joining an undergraduate degree and have a household income below £35,000, you could be eligible for a Liverpool Bursary worth up to £2,000 for each year of undergraduate study.

•

#### **ASYLUM SEEKERS SCHOLARSHIP**

Home students

<u>Apply for an Asylum Seekers Scholarship and you could have your tuition fees paid in full and receive help with study costs. You'll need to have applied for asylum in the UK, or be the dependant of an asylum seeker, and be joining an eligible undergraduate degree.</u>

•

#### **CARE LEAVERS' OPPORTUNITY BURSARY**

• Home students

If you've spent 13 or more weeks in Local Authority care since age 14, you could be eligible for a bursary of £3,000 per year of study. You'll need to be a UK student joining an eligible undergraduate degree and be aged 28 or above on 1 September in the year you start.

•

#### **COWRIE FOUNDATION SCHOLARSHIP**

Home students

Are you a UK student with a Black African or Caribbean heritage and a household income of £25,000 or less? You could be eligible to apply for a Cowrie Foundation Scholarship worth up to £8,000 for each year of undergraduate study.

•

#### **ESTRANGED STUDENTS BURSARY**

Home students

If you're a UK student identified as estranged by Student Finance England (or the equivalent UK funding body), you could be eligible for a bursary of £1,000 for each year of

undergraduate study.

•

#### **GENESYS LIFE SCIENCES SCHOLARSHIP**

Home students

<u>Joining a School of Biosciences degree and have a household income of less than £25,000?</u>
<u>If you're a UK student, you could apply to receive £4,500 per year for three years of your undergraduate course.</u>

•

## GRADUATE ASSOCIATION HONG KONG & TUNG UNDERGRADUATE SCHOLARSHIPS

- International students
- Hong Kong

<u>If you're an undergraduate student from Hong Kong who can demonstrate academic excellence, you may be eligible to apply for a scholarship worth £10,000 in partnership with the Tung Foundation.</u>

•

#### **NOLAN SCHOLARSHIPS**

Home students

<u>Do you live in the Liverpool City Region with a household income of £25,000 or less? Did neither of your parents attend University? You could be eligible to apply for a Nolan Scholarship worth £5,000 per year for three years of undergraduate study.</u>

•

#### **ROLABOTIC SCHOLARSHIP**

• Home students

Are you a UK student with a household income of £25,000 or less? Did neither of your parents attend University? You could be eligible to apply for a ROLABOTIC Scholarship worth £4,500 for each year of your undergraduate degree.

•

#### SPORT LIVERPOOL PERFORMANCE PROGRAMME

Home and international students

<u>Apply to receive tailored training support to enhance your sporting performance. Our athlete support package includes a range of benefits, from bespoke strength and conditioning training to physiotherapy sessions and one-to-one nutritional advice.</u>

•

#### TECHNETIX BROADHURST ENGINEERING SCHOLARSHIP

Home students

<u>Joining a degree in the School of Electrical Engineering, Electronics and Computer Science? If you're a UK student with household income below £25,000, you could be eligible to apply for £5,000 a year for three years of study. Two awards will be available per academic year.</u>

**UNDERGRADUATE GLOBAL ADVANCEMENT SCHOLARSHIP** 

International students

If you're a high-achieving international student starting an undergraduate degree with us from September 2024, you could be eligible to receive a fee discount of up to £5,000. You'll need to achieve grades equivalent to AAA in A levels and be joining a non-clinical degree.

•

## UNIVERSITY OF LIVERPOOL INTERNATIONAL COLLEGE EXCELLENCE SCHOLARSHIP

• International students

Completed a Foundation Certificate at University of Liverpool International College (UoLIC)? We're offering a £5,000 fee discount off the first year of undergraduate study to some of the highest achieving students joining one of our non-clinical degrees from UoLIC.

•

## UNIVERSITY OF LIVERPOOL INTERNATIONAL COLLEGE FIRST CLASS SCHOLARSHIP

International students

We're offering a £1,000 fee discount for years 2 and 3 of undergraduate study to eligible students progressing from University of Liverpool International College. You'll need to be studying a non-clinical subject and get an average of 70% or above in year 1 of your degree.

•

## UNIVERSITY OF LIVERPOOL INTERNATIONAL COLLEGE IMPACT PROGRESSION SCHOLARSHIPS

• International students

If you're a University of Liverpool International College student awarded a Kaplan Impact Scholarship, we'll also consider you for an Impact Progression Scholarship. If selected, you'll receive a £3,000 fee discount off the first year of your undergraduate degree.

•

### **YOUNG ADULT CARER'S (YAC) BURSARY**

• Home students

If you're a young adult and a registered carer in the UK, you might be eligible for a £1,000 bursary for each year of study. You'll need to be aged 18-25 on 1 September in the year you start your undergraduate degree.

## **Entry requirements**

The qualifications and exam results you'll need to apply for this course.

Your qualification	Requirements  About our typical entry requirements
A levels	AAA including Mathematics  Applicants with the Extended Project Qualification (EPQ) are eligible for a reduction in grade requirements. For this course, the offer is <b>AAB</b> with <b>A</b> in the EPQ.  You may automatically qualify for reduced entry requirements through our contextual offers scheme.
GCSE	4/C in English and 4/C in Mathematics
Subject requirements	Mathematics For applicants from England: For science A levels that include the separately graded practical endorsement, a "Pass" is required.
BTEC Level 3 National Extended Certificate	Acceptable at grade Distinction* alongside AA at A level including A Level Mathematics.
BTEC Level 3 Diploma	Distinction* Distinction* in relevant BTEC considered alongside A Level Mathematics grade A. Accepted BTECs include Aeronautical, Aerospace, Construction, Mechanical, Mechatronics and Engineering.
BTEC Level 3 National Extended Diploma	Not accepted without grade A in A Level Mathematics.
International Baccalaureate	36 overall, including 5 at Higher Level Mathematics

Your qualification	Requirements About our typical entry requirements
Irish Leaving Certificate	H1,H1,H2,H2,H2,H2, including H2 in Higher Maths. We also require a minimum of H6 in Higher English or O3 in Ordinary English
Scottish Higher/Advanced Higher	Pass Scottish Advanced Highers with grades AAA including Mathematics
Welsh Baccalaureate Advanced	Acceptable at grade A alongside AA in A Level Mathematics.
Cambridge Pre-U Diploma	D3 in Cambridge Pre U Principal Subject is accepted as equivalent to A-Level grade A M2 in Cambridge Pre U Principal Subject is accepted as equivalent to A-Level grade B Global Perspectives and Short Courses are not accepted.
Access	Not accepted.
International qualifications	Many countries have a different education system to that of the UK, meaning your qualifications may not meet our entry requirements. Completing your Foundation Certificate, such as that offered by the <u>University of Liverpool International College</u> , means you're guaranteed a place on your chosen course.

#### **ALTERNATIVE ENTRY REQUIREMENTS**

- If your qualification isn't listed here, or you're taking a combination of qualifications, <u>contact us</u> for advice
- <u>Applications from mature students</u> are welcome.

# THE ORIGINAL REDBRICK

© University of Liverpool – a member of the Russell Group

Generated: 17 Oct 2024, 13:52