Course Specification

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Produced By:	Laura Clode
Status:	Validated

Core Information

Awarding Body / Institution:	University of Wolverhampton		
School / Institute:	School of Architecture and Built Environment		
Course Code(s):	CV004S01UV	Full-time	2 Years
UCAS Code:	729H		
Course Title:	HND Civil Engineering		
Hierarchy of Awards:	Higher National Diploma Civil Engineering awarded by the University of Wolverhampton Certificate of Higher Education Civil Engineering awarded by the University of Wolverhampton University Statement of Credit University Statement of Credit		
Language of Study:	English		
Date of DAG approval:	12/Apr/2017		
Last Review:	2015/6		
Course Specification valid from:	2012/3		
Course Specification valid to:	2021/2		

Academic Staff

Course Leader:	Julia Zakharova
Head of Department:	Mr Peter Mills

Course Information

Location of Delivery:	University of Wolverhampton
Category of Partnership:	Not delivered in partnership
Teaching Institution:	University of Wolverhampton
Open / Closed Course:	This course is open to all suitably qualified candidates.

Entry Requirements:

Entry requirements are subject to regular review. The entry requirements applicable to a particular academic year will be published on the University website (and externally as appropriate e.g. UCAS

2017 Entry

All Civil Engineering undergraduate programmes have been reviewed to ensure that their entry requirements clearly demonstrate the different levels required for each of the programmes. For this HND Civil Engineering the entry requirements are:

- 56 UCAS tariff points (2017 onwards) from either A levels or other entry routes detailed below;
- A minimum of grade DEE from A-Levels to include a science based subject.
- BTEC QCF Diploma grade at MM or BTEC QCF Subsidiary Diploma at grade D*.
- An Extended Diploma of MPP in a technical subject area.
- Applicants must have GCSE English and Maths at grade C+/4 or equivalent
- If you've got other qualifications or relevant experience, please contact The Gateway for further advice before applying.
- International entry requirements and application guidance can be found here

Those who do not meet the entry requirements may be offered an alternative course

Distinctive Features of the Course:

The HND Civil Engineering course has been designed to cater for both school leavers and practitioners and trainees who want to further their professional development within the industry.

The civil engineering staff, at the University of Wolverhampton, engage closely with the students. This enables the staff and students to get to know each other well and to develop personal relationships which help with both studying and dealing with emotional and professional development.

Graduates of the course can progress, at an advanced level, onto the BEng (Hons) Civil & Transportation Engineering degree.

Lecturers on this course are a blend of respected academics and experienced professionals. Students are exposed to a sound theoretical base coupled with numerous practical examples and exercises.

The civil engineering section has excellent links with civil engineering companies as well as the professional bodies, namely: the Institution of Civil Engineers, the Institution of Structural Engineers, the Chartered Institution of Highways and Transportation and the Institute of Highway Engineers. Students are actively encouraged to become student members of the professional bodies.

Educational Aims of the Course:

HND (Civil Engineering) is professionally accredited and approved by the ICE, IStructE, CIHT and IHE as fully satisfying the educational base for an Engineering Technician (EngTech) and partially meeting the educational base for an Incorporated Engineer. It also provides a profession route onto the BEng (Hons) Civil & Transportation Engineering degree course which fully satisfies the academic base for an Incorporated

Engineer.

The civil engineering industry is responsible for the design, management and construction of major infrastructure projects such as dams, reservoirs, transport projects, bridges, major buildings, flood defences, water supply, sewage treatment, harbours and sea defences.

The aim of this course is to develop students with a technical understanding of the civil engineering industry including the application of proven techniques and theories for the solution of real life problems. Thus the course will:

- Address industry's demand for technicians who can integrate the principles and applications of civil engineering, and apply them to infrastructure and construction projects, in a technical context;
- Enable students to advance their existing careers in civil engineering to a higher level which requires the exercise of judgement, and the ability to make decisions that reflect a responsible and ethical outlook;
- Furnish students with a technical understanding of the fundamentals of geotechnics leading to some simplified analysis and design, the principles of structural design, including material properties, an understanding of fluid flows, a practical understanding of current surveying techniques, as well as transportation and sustainability issues. Provide a broadly based education in civil engineering, allowing scope for continued development into a wide range of disciplines within the civil engineering and construction related areas.

Intakes:

September

Major Source of Funding:

Office for Students (OFS)

Tuition Fees:

Tuition fees are reviewed on an annual basis. The fees applicable to a particular academic year will be published on the University website.

Year	Status	Mode	Amount
2020/1	HEU	Full Time	£
2020/1	Overseas	Full Time	£
2020/1	Home / EU	Full Time	£
2020/1	Home / EU	Part Time / Full Time	£

PSRB:

CV004S01UV (Full-time)

Professional Accreditation Body:
Chartered Institute of Highways & Transportation (CIHT)

Accrediting Body:
Chartered Institute of Highways and Transportation (CIHT)

Accreditation Statement:
Accredited by the Chartered Institution of Highways and Transportation (CIHT) on behalf of the Engineering Council for the purposes of partially meeting the academic requirement for registration as an Incorporated Engineer.

Approved	Start	Expected End	Renewal
03/Oct/2016	03/Oct/2016	31/Aug/2022	01/Sep/2022

CV004S01UV (Full-time)

Professional Accreditation Body:
Institute of Highway Engineers (IHE)

Accrediting Body:
Institute of Highway Engineers (IHE)

Accreditation Statement:
Accredited by the Institute of Highway Engineers (IHE) on behalf of the Engineering Council for the purposes of partially meeting the academic requirement for registration as an Incorporated Engineer.

Approved	Start	Expected End	Renewal
03/Oct/2016	03/Oct/2016	31/Aug/2022	01/Sep/2022

CV004S01UV (Full-time)

Professional Accreditation Body:
Institution of Civil Engineers (ICE)

Accrediting Body:
Institution of Civil Engineers (ICE)

Accreditation Statement:
Accredited by the Institution of Institution of Civil Engineers (ICE) on behalf of the Engineering Council for the purposes of partially meeting the academic requirement for registration as an Incorporated Engineer.

Approved	Start	Expected End	Renewal
03/Oct/2016	03/Oct/2016	31/Aug/2022	01/Sep/2022

CV004S01UV (Full-time)

Professional Accreditation Body:
Institution of Structural Engineers (IStructE)

Accrediting Body:
Institution of Structural Engineers (IStructE)

Accreditation Statement:
Accredited by the Institution of Structural Engineers (IStructE) on behalf of the Engineering Council for the purposes of partially meeting the academic requirement for registration as an Incorporated Engineer.

Approved	Start	Expected End	Renewal
03/Oct/2016	03/Oct/2016	31/Aug/2022	01/Sep/2022

Course Structure:

September (Full-time)

Year 1

Module	Title	Credits	Period	Type
4MA007	Engineering Mathematics	20	YEAR	Core
4CV003	Principles of Design	20	YEAR	Core
4CV002	Mechanics of Materials	20	SEM1	Core
4CV005	Professional Skills and Management	20	SEM1	Core
4CV001	Fundamentals of Geotechnics	20	SEM2	Core
4CV009	Site Surveying	20	SEM2	Core

September (Full-time)

Year 2

Module	Title	Credits	Period	Type
5CV005	Hydraulics	20	YEAR	Core
5CN022	Construction Law	20	YEAR	Core
5CV001	Structural Applications	20	SEM1	Core
5CV003	Transportation Engineering	20	SEM1	Core
5CV009	Geotechnical Applications	20	SEM2	Core
5CV014	Civil Engineering Project	20	SEM2	Core

Please note: Optional modules might not run every year, the course team will decide on an annual basis which options will be running, based on student demand and academic factors, to create the best learning experience.

Learning, Teaching and Assessment

Academic Regulations Exemption:

Section 4.4.4 - Exemption in accordance with Professional Body (Engineering Council) requirements. Compensation will be limited to no more than 20 credits overall with no additional third attempts (repeats will be allowed).

APPROVED by AFRSC on 16/5/2019.

Reference Points:

- QAA National Qualifications Framework
- Pearson (Edexcel) framework for education
- QAA Subject Benchmark Statement for Engineering
- Engineering Council UK-Spec 2014
- Joint Board of Moderators Accreditation Guidance and Documentation
- School E&D policy
- Equality Act 2010

Learning Outcomes:

HNC Course Learning Outcome 1 (HNCCLO1)

Demonstrate understanding and knowledge of the fundamentals of geotechnics and the principles of structural design, including material properties.

HNC Course Learning Outcome 2 (HNCCLO2)

Apply appropriate practical techniques to evaluate the properties of civil engineering materials and in the utilisation of surveying instruments.

HNC Course Learning Outcome 3 (HNCCLO3)

Utilise basic mathematical and analytical techniques for the solving of civil engineering problems.

HNC Course Learning Outcome 4 (HNCCLO4)

Use effective communication and interpersonal skills in a variety of oral and written formats with appropriate levels of supportive information.

HNC Course Learning Outcome 5 (HNCCLO5)

Demonstrate a personal commitment to the civil engineering code of professional conduct, by the preparation of the documents needed to become registered engineering technicians.

HND Course Learning Outcome 1 (HNDCLO1)

Demonstrate understanding and knowledge of the fundamentals of geotechnics and the principles of structural design, including material properties.

HND Course Learning Outcome 2 (HNDCLO2)

Apply appropriate practical techniques to evaluate the properties of civil engineering materials and in the utilisation of surveying instruments.

HND Course Learning Outcome 3 (HNDCLO3)

Utilise mathematical and analytical techniques for the solving of civil engineering problems.

HND Course Learning Outcome 4 (HNDCLO4)

Use effective communication and interpersonal skills in a variety of oral and written formats, culminating in the production of an individual research-based project.

HND Course Learning Outcome 5 (HNDCLO5)

Demonstrate effective use of industrial standard transportation software and a good appreciation of sustainability issues within the civil engineering industry.

HND Course Learning Outcome 6 (HNDCLO6)

You will develop knowledge and understanding, the legal framework in which the built environment and in particular the construction industry operates and apply that knowledge through the use of case analysis.

Overview of Assessment:

Module	Title	Course Learning Outcomes
4CV001	Fundamentals of Geotechnics	HNCCLO1, HNCCLO2
4CV002	Mechanics of Materials	HNCCLO1, HNCCLO3
4CV003	Principles of Design	HNCCLO1, HNCCLO2, HNCCLO5
4CV005	Professional Skills and Management	HNCCLO4, HNCCLO5
4CV009	Site Surveying	HNCCLO4
4MA007	Engineering Mathematics	HNCCLO3
5CN022	Construction Law	HNDCLO4, HNDCLO6
5CV001	Structural Applications	HNDCLO1, HNDCLO3
5CV003	Transportation Engineering	HNDCLO2, HNDCLO5
5CV005	Hydraulics	HNDCLO2, HNDCLO3
5CV009	Geotechnical Applications	HNDCLO1, HNDCLO2, HNDCLO3, HNDCLO5
5CV014	Civil Engineering Project	HNDCLO4, HNDCLO6

Teaching, Learning and Assessment:

- Attending, taking notes and asking questions in lectures,
- Using audio-visual learning materials
- Carrying out supervised practical work
- Reading articles, chapters and books
- Accessing appropriate sites on the internet
- Field trips to towns or cities, visiting buildings, construction sites and observing work in progress
- Interact with industry and industry professionals
- Interaction with the professional body
- Preparing appropriate documentation, to industry standards, including plans, specifications, cost information, based on realistic construction projects
- Performing group exercises and projects
- Making oral presentations
- Preparation of professional standard reports
- Supervised practical work such as surveying and laboratory tests
- Engaging in discussion with academic staff and fellow students in seminars, workshops and tutorials
- Preparing for examinations
- Using computer software for analysis and design
- Problem solving exercises, closed and open ended problems

- Information retrieval from articles, books and journals for assessment.

Assessment Methods:

At the University of Wolverhampton, a variety of modes of assessment will be used to support and test your learning and progress and to help you develop capabilities that are valued beyond your University studies and into your working life. Your course may include a variety of assessment activities:

Written examinations (including online examinations, open and closed book examinations and quizzes)
Coursework (for example, essays, reports, portfolios, project proposals and briefs, CVs, poster presentation)
Practical (for example, oral and video presentations, laboratory work, performances, practical skills assessment)

In the final year of your undergraduate degree, and at the end of your postgraduate degree, you are likely to be expected to write an extended piece of work or research, such as a dissertation or a practice-based piece of research.

Student Support:

Relevant course material will be delivered principally through lectures, classroom discussion, group work, e-media (e.g. e-portfolios, CANVAS) and practical sessions - including class, laboratory and (where appropriate) field-based.

Depending on the module studied there will be different emphases on different methods, however there will be a strong emphasis on applying knowledge through practical and /or fieldwork and problem-solving approaches across all modules and levels of study.

Fundamental principles will be reinforced and given applied relevance by case studies within tutorials and seminars. Group working will be encouraged both within formal sessions and on-line. Practical skills will be undertaken and practiced to increasing levels of independence from the use of elementary equipment, and to more advanced skills development.

Vocational experience and relevance will be promoted by the Civil Engineering Project module and the use within modules of presentations by guest speakers with vocational specialisms to emphasise the applied relevance of module content. Students are required to use work experience to enhance employability and to develop personal course specialisms.

Digital literacy: Use of generic and subject-specific IT is essential to all aspects of the course. Students will routinely access e-information and engage with e-learning via CANVAS. Additionally they will develop familiarity with subject-specific IT, such as geographical information systems, digital media, Global Positioning Systems and Building Information Modelling.

Knowledgeable and Enterprising: Applying skills and knowledge to real-world scenarios is again a central tenet of the course and is evidenced throughout all levels. Such skills develop critical thinking and prepare students for the challenges posed by professional work environments.

Global citizens: The course has both by design and default a global perspective. Examples and case studies take an international viewpoint to reflect the student's wider interests.

Employability in the Curriculum:

Civil engineering technicians are employed by contractors and consulting engineers, and in mainstream organisations such as local authorities, public bodies and government departments concerned with the Built Environment.

You may also have the exciting opportunity to work on national and international infrastructure projects.

Successful completion of the HND in Civil Engineering provides the opportunity for you to progress with

advanced entry onto the BEng (Hons) Civil and Transportation Engineering.

These could then lead to Incorporated or Chartered Civil Engineer status.