

BUILDING (BLDG)

BLDG 0001 Academic Skills for Construction Management (WSTC Prep) (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg0001/>) **Legacy Code:** 700200

This unit is designed to assist students to become successful independent and reflective learners. It introduces students to a range of theories and concepts to facilitate the development of practical skills and personal attitudes necessary for success in tertiary study. The unit also develops basic competencies in using computers and application software for the Building Design Management and Construction Management industries. The unit covers the use of word-processing software and spreadsheets. Students are also introduced to project management and design software.

Level: Undergraduate Level 0 Preparatory subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 0002 Building Calculations (WSTC Prep) (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg0002/>) **Legacy Code:** 700318

This unit is designed to assist students to become competent in the field of introductory senior mathematics. It introduces and reinforces mathematical skills in the areas of scale, application of scale, Pythagoras theory, trigonometry, sine and cosine, application of sine and cosine, building volumes, application of building volumes, gradients, application of gradients and thermal flow. Emphasis is placed on developing key competencies in building calculations.

Level: Undergraduate Level 0 Preparatory subject

Equivalent Subjects: MATH 0027 - Scientific Methods in Construction Management

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 1006 Building 2 (WSTC) (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg1006/>) **Legacy Code:** 700071

This unit has been replaced by equivalenet unit 700305 from Term 3, 2021. The aim of this unit is to provide students with an overview of the design, classification, applicable Australian Standards, structural systems, construction techniques, materials handling systems, building services, fit-out and finishes for larger scale buildings.

Level: Undergraduate Level 1 subject

Equivalent Subjects: BLDG 1005 - Building 2

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 1007 Construction Work Safety (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg1007/>) **Legacy Code:** 301061

This introductory unit describes the context of safety management in the Australian construction industry. The topics covered include: The poor long-term record in the construction industry on Workplace Health and Safety (WHS); Strategies for improving the industry performance; Introduction to hazard identification and risk management; and Individual safety awareness and personal responsibility.

Level: Undergraduate Level 1 subject

Equivalent Subjects: BLDG 1008 - Construction Work Safety (WSTC)

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 1008 Construction Work Safety (WSTC) (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg1008/>) **Legacy Code:** 700256

This unit describes the context of safety management in the Australian construction industry. The topics covered include: The poor long-term record in the construction industry on Workplace Health and Safety (WHS); Strategies for improving the industry performance; Introduction to hazard identification and risk management; and Individual safety awareness and personal responsibility.

Level: Undergraduate Level 1 subject

Equivalent Subjects: BLDG 1007 - Construction Work Safety

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 1009 Environmental Building Design (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg1009/>) **Legacy Code:** 301062

This unit explores the important parameters that are used to facilitate sustainable change in the built environment. Building design is a tool to minimise the use of scarce resources and reduce the impact on the natural Australian landscape. Improving the standard of liveability in urban and peri-urban communities is addressed through the development of holistic building design solutions.

Level: Undergraduate Level 1 subject

Equivalent Subjects: BLDG 1010 - Environmental Building Design (WSTC)

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 1010 Environmental Building Design (WSTC) (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg1010/>) **Legacy Code:** 700255

This unit explores the important parameters that are used to facilitate sustainable change in the built environment. Building design is a tool to minimise the use of scarce resources and reduce the impact on the natural Australian landscape. Improving the standard of liveability in urban and peri-urban communities is addressed through the development of holistic building design solutions.

Level: Undergraduate Level 1 subject

Equivalent Subjects: BLDG 1009 - Environmental Building Design

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 1011 Property Building (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg1011/>) **Legacy Code:** 301157

This unit provides students with an overview of regulations and construction techniques with an emphasis on low-rise residential buildings in the Australian context. It covers general process; building regulations; environmental issues; surveying techniques; structural elements (footings, framing and bracing); envelope; services; fit-out and finishes.

Level: Undergraduate Level 1 subject

Incompatible Subjects: BLDG 1001 Building 1 BLDG 1003 Building 1 (WSTC)

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 1012 Property Development Controls (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg1012/>) **Legacy Code:** 200435
 Property Development Controls provides students with an understanding of the property planning process from both a State government and Local government perspective. The unit will cover the areas of planning instruments, planning process, property development control issues and planning applications. The unit will also address the areas of the valuation and development impact of planning and environment regulations, with specific reference to the regulatory framework that regulates planning and development in NSW and the impact on the property industry in Australia.

Level: Undergraduate Level 1 subject

Incompatible Subjects: ARCH 2003 - Development Control

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 1013 Building Science (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg1013/>) **Legacy Code:** 301219
 This unit provides students with an introductory overview of the way in which scientific principles impact on the structure, fabric and performance of the built environment. Areas covered will include the concepts of force, energy and work in building structures; properties of common building materials; and significant aspects of heat, light and sound in buildings. All the theoretical content will be contextualised within examples drawn from the construction industry. Students will be able to recognise the critical data required for practical decision-making in the area of building technology.

Level: Undergraduate Level 1 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 1014 Non-Residential Building (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg1014/>) **Legacy Code:** 301227
 The aim of this unit is to provide students with an introduction to the design, classification, applicable Australian Standards, structural systems, construction techniques, materials handling systems, building services, fit-out and finishes for larger scale buildings. The unit focusses on non-residential building projects such as shopping centres, factories, warehouses, office buildings and associated facilities.

Level: Undergraduate Level 1 subject

Equivalent Subjects: BLDG 1004 Building 2

BLDG 1006 Building 2 (WSTC)

BLDG 1005 Building 2

BLDG 1017 Non Residential Building (WSTC)

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 1015 Residential Building (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg1015/>) **Legacy Code:** 301226
 This unit provides students with an overview of regulations and construction techniques with an emphasis on low-rise residential buildings in the Australian context. It covers general process, building regulations, environmental issues, surveying techniques, structural elements (footings, framing and bracing), envelope, services, fit-out and finishes.

Level: Undergraduate Level 1 subject

Equivalent Subjects: BLDG 1002 Building 1

BLDG 1003 Building 1 (WSTC)

BLDG 1001 Building 1

BLDG 1018 Residential Building (WSTC)

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 1016 Building Science (WSTC) (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg1016/>) **Legacy Code:** 700308
 This unit provides students with an introductory overview of the way in which scientific principles impact on the structure, fabric and performance of the built environment. Areas covered will include the concepts of force, energy and work in building structures; properties of common building materials; and significant aspects of heat, light and sound in buildings. All the theoretical content will be contextualised within examples drawn from the construction industry. Students will be able to recognise the critical data required for practical decision-making in the area of building technology.

Level: Undergraduate Level 1 subject

Equivalent Subjects: BLDG 1013 - Building Science

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 1017 Non-Residential Building (WSTC) (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg1017/>) **Legacy Code:** 700305
 This unit provides students with an introduction to the design, classification, applicable Australian Standards, structural systems, construction techniques, materials handling systems, building services, fit-out and finishes for larger scale buildings. The unit focusses on non-residential building projects such as shopping centres, factories, warehouses, office buildings and associated facilities.

Level: Undergraduate Level 1 subject

Equivalent Subjects: BLDG 1004 - Building 2 BLDG 1006 - Building 2 (WSTC) BLDG 1005 - Building 2 BLDG 1014 - Non-Residential Building

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 1018 Residential Building (WSTC) (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg1018/>) **Legacy Code:** 700304
 This unit provides students with an overview of regulations and construction techniques with an emphasis on low-rise residential buildings in the Australian context. It covers general process, building regulations, environmental issues, surveying techniques, structural elements (footings, framing and bracing), envelope, services, fit-out and finishes.

Level: Undergraduate Level 1 subject

Equivalent Subjects: BLDG 1002 - Building 1 BLDG 1003 - Building 1 (WSTC) BLDG 1001 - Building 1 BLDG 1015 - Residential Building

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 2001 Building Estimates and Tendering (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg2001/>) **Legacy Code:** 301207
 This unit will provide students with an understanding of the principles of design economics and the factors that affect the cost of buildings. Students will learn cost planning process and will be introduced to a range of estimating techniques that could be used at various stages of a building project. A particular focus would be to understand the tendering process and how to prepare detailed estimates using unit rate method.

Level: Undergraduate Level 2 subject

Equivalent Subjects: BLDG 2010 - Estimating 1

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 2002 Building Measurement (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg2002/>) **Legacy Code:** 301208

This unit is designed to develop the techniques required to measure, quantify and prepare bills of quantities for residential construction using standard method of building measurements. It will help students to appreciate basic role of a quantity surveyor.

Level: Undergraduate Level 2 subject

Equivalent Subjects: GEOM 2001 - Quantity Surveying 1

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 2003 Building Regulations Studies (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg2003/>) **Legacy Code:** 300885

This unit develops an awareness of the regulations used to control risk in buildings. Major sources of risk, such as fire and public health, are identified and controlled. Building regulations of high risk regions, such as cyclonic, seismic and bushfire-prone areas, are also discussed. The unit emphasises the safety of vulnerable occupants, such as young children, disabled people and the elderly. The unit also explores recent developments in the National Construction Code (NCC: formerly BCA) concerning energy efficiency.

Level: Undergraduate Level 2 subject

Equivalent Subjects: BLDG 3002 - Building Regulation Studies BLDG 3003 - Building Regulation Studies

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 2004 Built Heritage (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg2004/>) **Legacy Code:** 301085

This unit explores the history of building design in Australia and applies this contextual knowledge to the design of additions to existing buildings, as well as, to infill development in heritage areas. Built form, scale, materials, finishes and streetscape are considered so that new structures complement rather than detract from existing heritage buildings. The appropriateness of preservation, restoration, renovation, retrofit and adaptation strategies for older buildings is examined in the context of market and regulatory constraints on built heritage.

Level: Undergraduate Level 2 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 2011 Contract Administration (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg2011/>) **Legacy Code:** 301224

This subject presents the principles of construction contracts and how the contracts are managed in a construction contract at an introductory level. Key project parties, project life cycle, procurement approaches, payment contracts and contract documents are also introduced. Students will complete a range of tutorials and assessments that aim to build understanding of the administration of a contract while further developing the communication skills and basic ability to read, review and interpret contract

Level: Undergraduate Level 2 subject

Incompatible Subjects: GEOM 2002 Quantity Surveying 2

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 2012 Contract Administration (WSTC) (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg2012/>) **Legacy Code:** 700309

In this unit, students will examine and investigate the contractual aspects with respect to time, cost, quality and scope in building contracts. The students will develop technical skills for the administration of construction contracts and be able to prepare payment certificates and cash flow statements.

Level: Undergraduate Level 2 subject

Equivalent Subjects: BLDG 2011 Contract Administration

Incompatible Subjects: GEOM 2002 Quantity Surveying 2

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 2014 Work-Integrated Learning in Sustainable Construction (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg2014/>) **Legacy Code:** 301429

In this unit, students will engage in project-based learning related to Sustainable Construction to practice sustainable approaches in real construction projects. Students will select a project with an agreed industry partner, which will involve sustainable construction practices, for example: sustainability assessments, managing green building projects, carbon emission assessments, cost-benefit analysis and the circular economy. This unit contributes towards the skills required for a work-ready graduate and allows the student to plan, undertake and report on a specific aspect of practice in the context of work.

Level: Undergraduate Level 2 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 3001 Building Design Process (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg3001/>) **Legacy Code:** 301087

Building design is an iterative process. In this subject students will gain experience in generating design proposals and responding to simulated client, regulator and stakeholder feedback. Holistic design solutions that address economic, environmental and social issues will be generated for realistic building projects with an emphasis on regulatory compliance and project value for money.

Level: Undergraduate Level 3 subject

Pre-requisite(s): BLDG 3007

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 3004 Construction Information Systems (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg3004/>) **Legacy Code:** 200503

This unit is designed to provide skills and knowledge for information management technology and practice as it relates to the building industry. The unit gives an overview of information management, data collection and storage, information classification systems, communications, specialist computer applications and artificial intelligence.

Level: Undergraduate Level 3 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 3006 Construction in Practice 1 (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg3006/>) **Legacy Code:** 300886

This unit is designed to allow the student to gain experience with the complexity of the construction industry by integrating knowledge from earlier units. The unit involves group work on construction planning and management, regulatory control and client liaison required for initiating and completing a residential construction project.

Level: Undergraduate Level 3 subject

Pre-requisite(s): BLDG 1001 AND

ARCH 1001 AND

BLDG 1005

Equivalent Subjects: BLDG 2008 - Construction in Practice 1

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 3007 Design Brief Formulation (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg3007/>) **Legacy Code:** 301086

This unit explores the process of formulating the quantitative and qualitative requirements for a complex construction project. Students will analyse and evaluate competing parameters for a specific building project which contains residential, commercial and community facilities.

Level: Undergraduate Level 3 subject

Pre-requisite(s): ARCH 1001 OR

ARCH 1004 OR

ARCH 1004

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 3008 Negotiation in the Built Environment (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg3008/>) **Legacy Code:** 301105

Construction and Property development is the most complex activity in the Australian economy. There are many professional groups involved in the sector. This unit will train students in the negotiation skills required to successfully complete projects from the perspective of a construction manager, building surveyor, planner, civil engineer, construction lawyer and property developer.

Level: Undergraduate Level 3 subject

Equivalent Subjects: BLDG 2009 - Decision Making for Construction Professionals

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 3009 Quality and Value Management (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg3009/>) **Legacy Code:** 300748

Introduces students to the concepts of quality systems value management techniques and their application to the built environment. Students will gain knowledge of quality assurance and value management theories, techniques and principles so that they can apply as they enter into their professional careers.

Level: Undergraduate Level 3 subject

Equivalent Subjects: LGYA 4735 - Quality and Value Management

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 3010 Building Cost Studies (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg3010/>) **Legacy Code:** 301234

This Subject provides students with advanced quantity surveying techniques for the evaluation of construction costs in the construction management and built environment context. Students learn to perform various cost studies, consider sustainability issues and make whole life cost choices that contribute to cost effective construction projects. The tools and techniques students learn are essential in dealing with increasing complexity in the industry.

Level: Undergraduate Level 3 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 3011 Construction Business Management (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg3011/>) **Legacy Code:** 301427

This unit is centred around the dynamics of managing a construction contracting enterprise. Student groups act as a Board of Directors to plan, communicate, execute, and adjust strategy as they pursue to optimise their firm's outcomes in an online competitive game. Knowledge areas of staffing, finance, labour management, risk management and tendering are challenged. Each week, student groups are scored objectively and given feedback. This shows the team the strengths and weaknesses of the prior week's decision making. Academic staff will work with each student group to refine and improve understanding of the complex dynamics involved. Assessments will be based on decision-making improvement and mastery of strategic and operational principles.

Level: Undergraduate Level 3 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 3013 Work-Integrated Learning in Global Construction (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg3013/>) **Legacy Code:** 301431

In this unit, students will engage in project-based learning related to Global Construction practices in the industry. Students will select a project with an agreed industry partner on construction and management of mega or complex projects to study aspects such as stakeholder management and communication, modern construction methods, productivity and quality assurance. This unit contributes towards the skills required for a work-ready graduate and allows the student to plan, undertake and report on a specific aspect of practice in the context of work.

Level: Undergraduate Level 3 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 3014 Introduction to Building Fire Safety (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg3014/>)

This subject provides the foundations in fire safety engineering principles and the techniques and tools used in building fire safety design. Students learn the key principles of fire and heat transfer, building material and cladding systems' behaviours in fire, fire testing methods, fire-damage assessment methods, and concepts of performance-based building fire safety design. Using examples of fire engineering briefs and reports, students expand their knowledge and skills in real-world contexts. It also builds the skills required for a work-ready graduate and allows the student to plan, undertake and report on a specific aspect of practice in the context of their work.

Level: Undergraduate Level 3 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 3015 Contract Management (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg3015/>)

This subject provides students with the knowledge and skills to manage building contracts, expanding on knowledge gained in the first year core subject Contract Administration. Students learn the professional practice skills for quantity surveying and contract administration services during construction. Knowledge gained in this subject will benefit students aspiring to careers such as Contract Managers and Quantity Surveyors.

Level: Undergraduate Level 3 subject

Incompatible Subjects: GEOM 2002 Quantity Surveying 2

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 3016 Work-Integrated Learning in Advanced Digital Construction (20 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg3016/>)

As increased digitalisation drives the construction industry, this unit engages students in industry project-based learning related to Advanced Digital Construction. Students will select a project with an agreed industry partner, which involves or anticipates involvement in any of the following advanced digital construction applications: BIM, e-procurement and tendering, smart contracts, robotics, drones, artificial intelligence, virtual reality, IoT, additive manufacturing (3D) and digital twins. This unit contributes towards the skills required for a work-ready graduate and allows the student to plan, undertake and report on a specific aspect of practice in the context of work.

Level: Undergraduate Level 3 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 4001 Building Design Project 1 (20 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg4001/>) **Legacy Code:** 301099

In this subject, students will source a suitable design project to complete as a capstone work which illustrates the skills they have developed throughout their program. The project will contain a level of complexity exceeding that of previous building designs produced in the program. Diverse stakeholder input on the projects impact will be gathered and assessed. Knowledge gained in this subject will benefit students aspiring to roles in the integrated building design industry and the delivery of building projects.

Level: Undergraduate Level 4 subject

Pre-requisite(s): BLDG 3001

Incompatible Subjects: CIVL 4018 Building Design Project 1 (Honours)

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 4002 Building Design Project 2 (20 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg4002/>) **Legacy Code:** 301100

In this subject, students demonstrate professional standards in completing a design solution for a specific real-world project. Students expand on the design solution completed for Building Design Project 1 into a fully resolved CAD model suitable for costing, scheduling, and contracting. Students apply technical and critical thinking skills to address the project constraints, and present project documentation (site plans, floor plans, elevations, sections, details and specifications) of a quality suitable to apply for a Construction Certificate. Knowledge gained in this subject will benefit students aspiring to roles in the integrated building design industry and the delivery of building projects.

Level: Undergraduate Level 4 subject

Pre-requisite(s): NONE

Co-requisite(s): BLDG 4001 Building Design Project 1

Incompatible Subjects: CIVL 4019 Building Project 2 (Honours)

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 4003 Construction Economics (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg4003/>) **Legacy Code:** 200504

This subject is designed to provide students with: an understanding of economic principles, national and international economic issues; general investment issues; how the national and international economy functions; how the building industry and the building firm relates to the national and international economy; and how economic reasoning may be applied to various problems in the building industry.

Level: Undergraduate Level 4 subject

Co-requisite(s): BLDG 4012 Industry Based Learning for students in 2607 Bachelor of Construction Management

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 4004 Estimating 2 (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg4004/>) **Legacy Code:** 300726

The aim of this unit is to give students a hands-on experience of the tendering process for construction professionals. Students undertake a team research project to determine the optimum parameters for a civil/building infrastructure estimation.

Level: Undergraduate Level 4 subject

Equivalent Subjects: LGYB 5406 - Estimating 2

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 4005 Major Project in Construction (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg4005/>) **Legacy Code:** 300536

This unit will enhance the ability of students to investigate a selected topic with a construction industry focus and involves preparation of a literature review. Content includes mechanics of a literature review, use of research (or strategic planning) in the construction industry, development of high-value competencies in terms of marketing, organisational structure and project management.

Level: Undergraduate Level 4 subject

Pre-requisite(s): Successful completion of 200 credit points for students in 2607 Bachelor of Construction Management and 3697 Bachelor of Construction Management Studies (exit only)

Successful completion of 130 credit points for students enrolled in Bachelor of Construction Management Studies Bachelor of Laws

Equivalent Subjects: LGYB 5398 - Major Project 1

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 4006 Modern Construction Enterprises (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg4006/>) **Legacy Code:** 301158

In this unit the pace of change in the construction industry will be addressed. Particular emphasis is placed on the ways in which construction businesses need to adapt their practices to deal with increased digitisation, industrialisation and globalisation. The impact of disruptive innovation on 'back of house' operations in construction enterprises will be studied and trends identified.

Level: Undergraduate Level 4 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 4007 Modern Construction Projects (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg4007/>) **Legacy Code:** 301159

In this unit, accelerating changes in the way construction projects are procured and delivered will be studied. Innovations relating to pre-site construction and to productivity measurement will be evaluated. Quality assurance and risk management will be considered in the light of new project delivery systems. Ways to improve end user satisfaction with construction project delivery will be addressed.

Level: Undergraduate Level 4 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 4008 Digital Construction (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg4008/>) **Legacy Code:** 301225

This unit offers knowledge and skills essential for a successful application of Building Information Modelling (BIM) in the context of built environment. Building Information Modelling (BIM) has the potential to improve integration between design and construction processes, reduce design discrepancies and rework, optimise project time and cost performance, and manage risks. Students will develop an understanding of the generation, reviewing and application of 3D, 4D and 5D BIM models in building projects. Virtual and augmented reality, spatial information capture and performance management systems will also be introduced. This unit will be taught through intensive practice-based workshops and computing labs, enabling students to build skills in virtual design and construction processes.

Level: Undergraduate Level 4 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 4009 Residential Building Project (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg4009/>) **Legacy Code:** 301231

This unit is designed to allow students to gain experience with the complexity of the construction industry by integrating knowledge from earlier units. The unit involves group work on construction planning and management, regulatory control and client liaison required for initiating and completing a complex residential construction project.

Level: Undergraduate Level 4 subject

Pre-requisite(s): BLDG 1015 AND ARCH 1004

Equivalent Subjects: BLDG 2008 Construction in Practice 1
BLDG 3006 Construction in Practice 1

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 4010 Construction Research Methods (20 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg4010/>) **Legacy Code:** 301243

This unit introduces students to various research methods that are applicable for research in the Built Environment and also guides students on how to carry out a literature review leading to identifying a clear research question. Students will be required to submit a research proposal for an identified research problem within a chosen research topic, under the supervision of an assigned research academic.

Level: Undergraduate Level 4 subject

Pre-requisite(s): Students must be enrolled in programs 3762 Bachelor of Construction Management (Honours) and 3782 Bachelor of Construction Management Advanced (Honours)) and have completed 220 credit points

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 4011 Construction Thesis (20 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg4011/>) **Legacy Code:** 301244

In this subject, students continue their research based on the literature review and research design submitted as part of the Construction Research Methods, under the close guidance of the same research supervisor. The research will be extended using appropriate research methods to perform data collection, data analysis and research conclusions. The students will submit an original thesis report on a research endeavour (continued from the research report in unit Construction Research Methods). In addition to the specialist knowledge on the chosen research topic, students will learn a range of skills including academic writing, project management, critical thinking and analytical skills.

Level: Undergraduate Level 4 subject

Pre-requisite(s): BLDG 4010

Incompatible Subjects: ENGR 4024 - Construction Management Honours Thesis

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 4012 Industry Based Learning (0 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg4012/>) **Legacy Code:** 300724

Students are required to undertake 1200 hours of industry based experience as required by course and professional accreditation bodies.

Level: Undergraduate Level 4 subject

Equivalent Subjects: LGYB 5394 - Industry Based Learning

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 4013 Work-Integrated Learning in Construction Leadership (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg4013/>) **Legacy Code:** 301433

In this unit, students will engage in project-based learning related to Construction Leadership within an industry framework. Students will select a project with an agreed industry partner to develop any of the following managerial and leadership skills in construction settings: organisation management and applications, strategic management, change management, corporate social responsibility, human resource management, knowledge management and organisational resilience. This unit contributes towards the skills required for a work-ready graduate and allows the student to plan, undertake and report on a specific aspect of practice in the context of work.

Level: Undergraduate Level 4 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 4014 Building Design Project 1 (Honours) (20 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg4014/>)

This is a capstone subject, where students will source a suitable design project at their own initiative to illustrate the skills they have developed throughout their program. The project will contain a high level of complexity exceeding that of previous building designs produced in the program. Both the complexity level and the number of design constraints will distinguish this project from the ones undertaken in the non-honours stream subjects. Diverse stakeholder input on the project's impact will be gathered and assessed. The design solution generated will show mastery of resolving complex design problems which integrate technical knowledge with economic and social responsibility. These skills are highly sought after by employers in the building design industry.

Level: Undergraduate Level 4 subject

Pre-requisite(s): BLDG3001 - Building Design Process

Equivalent Subjects: CIVL 4018

Incompatible Subjects: BLDG4001 - Building Design Project 1 (non-honours stream)

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 4015 Building Design Project 2 (Honours) (20 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg4015/>)

In this subject, students will continue to develop the design solution they created in Building Design Project 1 (Honours) into a fully resolved CAD model suitable for costing, scheduling and contracting. Students apply technical and critical thinking skills to address the project constraints, and present project documentation (site plans, floor plans, elevations, sections, details and specifications) of a quality suitable to apply for a Construction Certificate. Complex constraints relating to buildability and efficient project delivery will be resolved. Strict budgetary constraints will be imposed and students will be expected to demonstrate a capacity to use lateral thinking and generate creative solutions in response to problematic situations which arise during project delivery but which were unknown at project commencement. Knowledge gained in this subject will benefit students aspiring to roles in the integrated building design industry and the delivery of building design solutions.

Level: Undergraduate Level 4 subject

Co-requisite(s): BLDG 4014 - Building Design Project 1 (Honours)
OR

CIVL 4018 - Building Design Project 1 (Honours)

Equivalent Subjects: CIVL 4019

Incompatible Subjects: BLDG4002 - Building Design Project 2 (non-honours stream)

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 4016 Work-Integrated Learning in Construction Procurement Management (20 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg4016/>)

In this subject, students will engage in project-based learning related to Construction Procurement to gain practical skills in managing complex and dynamic construction industry procurement practices. Students will select a project with an agreed industry partner on any of the following suggested topics: new procurement systems, commercial and business management implementations, ethics and trust-based relationships, risk management, sustainable and lean construction. This subject contributes towards the skills required for a work-ready graduate and allows the student to plan, undertake and report on a specific aspect of practice in the context of work.

Level: Undergraduate Level 4 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 5001 Construction Claims (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg5001/>)

This subject introduces contractual procedures and legal principles relating to construction claims. Students develop cognitive and technical skills to construct and assess construction claims through practical and real world activities. In addition, students examine delay analysis and quantum determination in extension of time (EoT) claims with real work examples. An important component of this subject is understanding the role and responsibility of an expert witness, managing expert appointments effectively, acquiring skills when compiling comprehensive expert reports and delivering expert evidence to tribunals. Students will have opportunities to expand their skills through professional practice tasks.

Level: Postgraduate Coursework Level 5 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 7001 Advanced Contract Management (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg7001/>) **Legacy Code:** 301188

This unit introduces various contract types and risks involved in construction project management. The unit extends to examining contractual claims management and procedures together with alternative dispute resolution methods. The unit will further help students to understand change management process and develop a change management plan.

Level: Postgraduate Coursework Level 7 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 7002 Building Regulations (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg7002/>) **Legacy Code:** 300947

This unit introduces the role and functions of the building surveyor and the National Construction Code of Australia (NCCA). The topics include building legislation, NCCA general provisions, structure and philosophy. Students are required to understand the objectives, the function statements and the performance requirements of various sections of Volume One of NCCA. The concept of performance based approach is discussed and compared with the prescriptive approach. The content covers the relationship between research in the development of building codes and the role played by approval/certifying authorities in building assessment and approval. Legal obligations of building surveyors, their tasks of assessment, enforcement and documentation are also explained.

Level: Postgraduate Coursework Level 7 subject

Equivalent Subjects: BLDG 7010 - Fire and Building Regulations

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 7003 Building Studies (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg7003/>) **Legacy Code:** 300716

This unit describes and analyses the technological, socio-economic and sustainability factors that influence the building industry. The topics include advances in contemporary issues affecting sustainability and energy conservation, access and adaptable housing, safety in special areas and building design in accordance with the relevant legislative requirements. Use of assessment tools for sustainability is covered. Discussions are also made on development management, the roles and the relationship between building owners / occupiers, developers and building surveyors.

Level: Postgraduate Coursework Level 7 subject

Equivalent Subjects: LGYB 5426 - Building Studies

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 7004 Building in Bushfire Prone Areas (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg7004/>) **Legacy Code:** 200458

This unit describes the basis for the design and construction of buildings to withstand bushfire attack, the measures that can be incorporated into building design to achieve this and the legislative building requirements affecting bushfire environments. The unit examines the mechanisms of bushfire attack on structures, the role of landscaping on building survival and how materials perform in the presence of a bushfire event. The unit describes the role of the Building Code of Australia (BCA) and Australian Standards in the construction of various building types and the legislative and regulatory environment in which this operates.

Level: Postgraduate Coursework Level 7 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 7005 Egress and Risk Assessment (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg7005/>) **Legacy Code:** 300717

This unit introduces the concept of risk assessment for fire safety systems relevant to life safety and property protection. The unit helps students develop an understanding of building occupant characteristics and human behaviour during fire emergencies. Parameters, methods and criteria for risk and economic assessments are covered in this unit.

Level: Postgraduate Coursework Level 7 subject

Equivalent Subjects: LGYB 5424 - Fire Safety Systems 1 (Property)

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 7006 Financing Cities in the Global Economy (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg7006/>) **Legacy Code:** 101315

Financing infrastructure to keep cities running and growing at a time when governments face new financial constraints is a key challenge for urban managers. In order to be able to contribute to the debate about financing cities it is important for future urban managers to develop a basic financial literacy, understand and draw on the options for financing essential urban functions in Australia cities and elsewhere, and assess the tensions involved in public and private financing pathways. This unit addresses these needs through both theoretical and practical approaches to the city as a set of flows within a wider urban network of relations. Students develop their understanding via interactive lectures, case studies, fieldwork exercises and assignments.

Level: Postgraduate Coursework Level 7 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 7007 Interpreting Building Regulations (Residential Buildings) (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg7007/>) **Legacy Code:** 301103

The basis of this unit is to ensure students become accustomed to reading and interpreting laws that specifically relate to building legislation. The unit provides students with an introduction to and sound working knowledge of the prescriptive provisions of the National Construction Code (BCA) Volume 1 & 2, associated Standards, codes and statutory interpretation as it applies to residential buildings. This unit will develop a sound knowledge of the National Construction Code (BCA) - Volume 2 and an introduction to rise in storeys, types of construction and the fire requirement for building elements in the National Construction Code (BCA) Vol. 1, Building Profession Act 2005 and other associated legislation. Residential building work includes work under the Home Building Act 1989, which involves the construction of a dwelling, and alterations or additions to a dwelling. It also will relate to repairing, renovating, decorating or applying protective treatment to a dwelling. The unit applies to residential buildings and associated structures and includes the evaluation and interpretation of performance requirements, classification of buildings according to National Construction Code (BCA) criteria, limitations of the referenced documents (National Construction Code (BCA) - Volume 2) and strategies for compliance. Students will need to relate the objectives of the National Construction Code (BCA) and the purpose of its respective provisions in relation to construction of residential buildings and the evaluation of associated documentation.

Level: Postgraduate Coursework Level 7 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 7008 Professional Practice and Building Law (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg7008/>) **Legacy Code:** 301104

The basis of this unit is to ensure students become accustomed to reading and interpreting building and related laws. The unit provides students with background knowledge of the negligence, administrative law, life safety, proportional liability, contracts and statutory interpretation as it applies to architecture, building surveying, fire engineering and bushfire protection. The unit studies the codes of professional conduct, ethics, conflict of interest and the rules of evidence within the legal constraints when acting as certifiers and or experts. The jurisdictional requirements for certification are considered and assessed. These professions can act as expert witnesses and consequently need to understand codes of professional conduct, ethics, conflict of interest and the rules of providing expert evidence. In doing so, they are potentially required to brief solicitors or other legal professionals and will ultimately have a duty to the court or tribunal.

Level: Postgraduate Coursework Level 7 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 7009 Project Procurement Systems (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg7009/>) **Legacy Code:** 301191

This unit examines contemporary practice in relation to procurement strategies such as traditional procurement, relational contracting, strategic project alliancing, and public-private partnerships / private finance initiatives within project environments. The unit will challenge students to examine built environment business ecologies which underpin strategic procurement decision making. Unique procurement environments will be explored, allowing the students to examine key themes of procurement management.

Level: Postgraduate Coursework Level 7 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 7011 Work-Integrated Learning in Project Management A (20 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg7011/>) **Legacy Code:** 301366
 This work integrated learning unit will provide students enrolled in the Master of Project Management with an opportunity to undertake work placement focusing on project management (PM) in a professional organisation within an industry relevant to students' specialisation or generic option. The placement will allow students to observe and develop PM professional skills and behaviour, integrate theoretical and practical PM knowledge and conventions into a real world setting, and establish project management competency, all in line with recognised world standard in project management. This unit aims to promote greater engagement with career planning and progression and hence improve job readiness.

Level: Postgraduate Coursework Level 7 subject

Incompatible Subjects: INFO 7010 - Research Project A INFO 7011 - Research Project B

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 7012 Work-Integrated Learning in Project Management B (20 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg7012/>) **Legacy Code:** 301367
 This WIL unit builds on its predecessor, Work-Integrated Learning in Project Management A and will provide students enrolled in the Master of Project Management with an opportunity to undertake work placement focusing on project management (PM) in a professional organisation within an industry relevant to students' specialisation or generic option. The placement will allow students to further develop PM professional skills and behaviour, integrate theoretical and practical PM knowledge and conventions into a real world setting, and establish project management competency, all in line with recognized world standard in project management. The unit aims to further promote greater engagement with career planning and progression and hence improve job readiness.

Level: Postgraduate Coursework Level 7 subject

Pre-requisite(s): BLDG 7011

Incompatible Subjects: INFO 7010 - Research Project A INFO 7011 - Research Project B

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 7013 Project Procurement Systems (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg7013/>) **Legacy Code:** 301492
 This subject examines contemporary practice in relation to procurement strategies such as traditional procurement, relational contracting, strategic project alliancing, and public-private partnerships / private finance initiatives within project environments. The subject will challenge students to examine built environment business ecologies which underpin strategic procurement decision making. Unique procurement environments will be explored, allowing the students to examine key themes of procurement management.

Level: Postgraduate Coursework Level 7 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 7014 Construction Industry Practice A (10 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg7014/>)

In this unit, students are placed with relevant employers to work on a variety of industry related tasks. Placements are structured for student engagement in professional work in their relevant field of study. Placement agencies ensure students are supervised by experienced practitioners, are mentored through site visits and work on projects in a professional capacity. Agreements with supervisors and clear communication lines are set to clarify student engagement and their involvement in meaningful professional tasks that contribute to an authentic learning experience. This unit aims to promote greater engagement with career planning and progression and hence improve job readiness.

Level: Postgraduate Coursework Level 7 subject

Pre-requisite(s): Students must be enrolled in courses 3705 Master of Fire Safety Engineering 3703 Master of Building Surveying or 3708 Master of Bushfire Protection and have completed a minimum of 40 credit points before enrolling in this unit

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 7015 Construction Industry Practice B (20 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg7015/>)

In this subject students are placed with relevant employers to work on a variety of industry related tasks. Placements are structured for student engagement in professional work in their relevant field of study. Placement agencies ensure students are supervised by experienced practitioners, are mentored through site visits and work on projects in a professional capacity. Agreements with supervisors and clear communication lines are set to clarify student engagement and their involvement in meaningful professional tasks that contribute to an authentic learning experience. This subject aims to promote greater engagement with career planning and progression and hence improve job readiness.

Level: Postgraduate Coursework Level 7 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject

BLDG 9001 Higher Degree Research Thesis - Building Science and Technology (20 Credit Points)

Subject Details (<https://hbook.westernsydney.edu.au/archives/2021-2022/subject-details/bldg9001/>) **Legacy Code:** 800033

Level: PhD and Research Masters Level 9 subject

Restrictions: Please see the Subject Details page for any restrictions for this subject