

Academic Timetabling

PURPOSE

This document articulates and clarifies College policy about the annual planning, preparation, production, publication and ongoing management of changes to the Academic Timetable (“AT”) at College.

More specifically, it defines the sequence of activity and core principles for establishing viable timetables that are student and lecturer effective, while achieving broader College goals around use of our scarcest spaces.

This policy provides definition and interpretation of the College Space Policy Framework¹ in the context of Shared Space, and should be read in conjunction with that framework.

GOALS

The goals of this Academic Timetable policy are:

- Deliver timetables that are student and lecturer focused, and promote excellent learning
- Reduce barriers to collegiate and broad based sharing of those teaching spaces in highest demand and thus deemed “scarce”
- Provide unambiguous clarity about how trade-offs between conflicting needs are resolved
- Reduce the overall administrative load placed on academic and support staff during timetable construction
- Provide a set of operational definitions and norms that enable more efficient production of timetables; as well as supporting evidence based, data led decisions about resolving issues
- Create the necessary foundations for service excellence in academic timetabling, in particular training for timetabling staff, tools, standards and support arrangements
- Promote transparency, measurable outcomes², evidence-based prioritisation and continuous improvement for all timetabling activity

SCOPE

This policy applies to all scheduled activity for College students. Broadly this covers:

- Undergraduate taught programmes including “Imperial Horizons” and “Year in Europe” modules
- Postgraduate taught programmes
- Modules that are fixed in time but otherwise optional in nature (including drop-in tutorials)
- Taught modules taken by MRes and PhD students
- Modules that are timetabled but otherwise not part of a degree programme (including Pre-sessional English, Academic English)
- Centre for Languages, Culture and Communications and Centre for Academic English teaching
- Non curricular, programme specific activities (including year induction)
- Department arranged teaching outside of the Autumn, Spring and Summer Term dates
- Placements³ for professional qualifications: publication into individual student timetables
- Outreach and Summer school teaching: course names and associated room bookings
- All physical spaces on all campuses and 3rd party premises used for activities within scope of this policy

¹ <https://www.imperial.ac.uk/about/leadership-and-strategy/provost/space-policy/>

² To include quantitative quality metrics for the structure of the timetable, and qualitative metrics for the wider experiential aspects of engagement with Timetabling as a College provided service

³ Including Medical placements, Industry placements, and other programme required placements

Agreed exclusions to this policy are:

- Placements for professional qualifications: location, supervisor details
- Year in Europe exchange periods
- All assessments within the scope of Examination Timetabling
- Summer school: individual student timetables
- Professorial Inaugural Lectures
- Institute and department-led Lecture series
- Early Years Education Centre
- Ad-hoc and emerging research seminars

DEFINITIONS

Annual College Calendar: incorporates the main structural dates for the College⁴ each year including closure dates (e.g., Christmas), fixed College level events (e.g., Graduation), term dates as agreed by Senate, and any other recurring events that affect the entirety of the College.

Imperial College Timetabling⁵ Academic Year: annual 12-month periods from the start of June until the end of July. Normally will be 52 weeks; except for 5 times every 28 years that will be 53 weeks⁶.

Teaching Time⁷: in principle, Teaching can be timetabled any time⁸ that the College is open, and where it is in the interests of the Student(s) and the College mission.

Core Teaching Year: a termly structure is defined to accommodate the majority of undergraduate teaching activity and a significant majority of postgraduate teaching. This structure consists of Autumn, Spring and Summer Terms; and the pre-sessional period between Summer and Autumn terms.

(Academic) Term⁹: defined periods in the Autumn, Spring and Summer that describe standard delivery patterns within Academic Years; including assessment periods.

Core Teaching Week: Monday to Friday, except for Wednesday afternoon.

Core Teaching Day: 09:00 to 18:00, with 1-hour minimum lunch break. Excludes Wednesday 12:00 onwards, a time set aside for sport and society events and activities of a non-compulsory nature.

College Level Event: specific events that constrain department timetables as a direct or indirect consequence of availability of any of: staff, students or rooms. These events include: Graduation, Registration, Welcome Week and Fresher's Fair, Imperial Festival, and College closure dates.

General Curricular Anchor Event: specific events that must be coordinated at a College level in order to achieve policy goals. These events include Wednesday

⁴ Refer to the College Space Sharing policy for a definitive list

⁵ While not aligned to HESA norms, this is the natural annual start point for Faculty of Medicine students

⁶ Refer to Timetabling Resources and FAQ: <http://www.imperial.ac.uk/timetabling/administrators/resources/>

⁷ Often relevant to post graduate taught programmes and modules best run on weekends, and evenings.

⁸ Consistent with published student commitments, and with CMA guidelines

⁹ Term dates each year are agreed by Senate: <http://www3.imperial.ac.uk/registry/currentstudents/termdates>

afternoon Sports and Society activities,” Imperial Horizons” teaching, and Central Teaching Contingency.

Discipline Specific Anchor Event: events fixed in time for purposes of national coordination, typically discipline specific. Examples include national examination conducted by GMC, the Frank Morton Sports day for Chemical Engineers and research seminars with fixed times and/or external visitors as determined by the Head of Department or nominee.

Central Teaching Contingency: centrally reserved blocks of time in large teaching spaces expressly available as contingency to allow scheduling of activities due to arising matters including lecturer sickness.

Timetabled Event: any activity that is relevant to an individual student whether pedagogic or extra-curricular in nature:

- i. All activities for credit including teaching, laboratories
- ii. Optional activities such as drop-in tutorials, etc.
- iii. Off campus programme arranged activities ¹⁰ including field trips, etc.
- iv. Scheduled personal study time (incl. cohort access times to discipline specific facilities)
- v. Other activities linked to extra-curricular student development including language skills, employability skills, study skills, academic writing, ensuring integrity - intellectual property, etc.

Academic Timetable: the complete schedule of Timetabled Events for an individual Student. Includes relevant resources such as rooms, lecturers, demonstrators, etc.

Viable¹¹ Academic Timetable: an academic timetable that has no clashes for core modules, no impractical travel, and for which all events have suitable resources (i.e., rooms that can accommodate the number of students timetabled to that event).

Effective Academic Timetable: at minimum a Viable Academic Timetable that is in addition qualitatively effective from the consensus point of view of Students and Staff (e.g., is balanced across the teaching day and week, location is convenient, etc.).

Preferred Academic Timetable: at minimum an Effective Academic Timetable that is in addition adjusted to reflect individual preferences (e.g., a lecturer swaps a module slot with a colleague, student swaps between tutorial groups).

Personalised Academic Timetable: an individual timetable that is at least a Viable Academic Timetable in terms of schedule, and that meets defined minimum quality standards for clarity, accessibility and completeness.

Aggregate Academic Timetable: The logical aggregate of all Academic Timetables, that covers all Timetabled Events for all programmes, staff, students and facilities.

Timetable Build Plan: The phasing and sequence of events for the build of each year’s Aggregate Academic Timetable, including main coordination and publication

¹⁰ Excludes placements and outward student exchange – see policy Scope section

¹¹ Note that a Viable Academic Timetable can become non-Viable as a consequence of operational factors (e.g., UCAS results and confirmations resulting in over recruitment to a particular programme already timetabled)

milestones; typically published in early November preceding the academic year being timetabled.

Timetabling Cluster: a grouping of departments that share common features enabling better overall outcomes when timetabled together. These features include geographic proximity (e.g., adjacent floors and buildings), complementarity of programme loads (e.g., high whole cohort module demand in 1st year matching to low whole cohort module demand in 4th year), and cross-programme sharable resources (e.g., rooms, teaching staff).

Option Streaming: approach to timetabling elective modules that recognises that certain elective modules form a natural learning pattern, and moreover some modules pairings are practically never taken by any single student; enabling parallel timetabling of learning streams.

Service teaching: Teaching provided to a programme by a lecturer from another department (incl., Imperial Horizons, Business School providing an Accounting for Engineering module).

Teaching scarcity list: an annually determined list of rooms identified as in highest demand through analysis of Celcat timetable data and other sources of information regarding teaching room utilisation.

POLICY

1. The approach, methods, tools and management of the Academic Timetable will be specified and overseen by the Central Timetabling Support Office (CTSO), on behalf of the Academic Registrar and of the Provost; and who is accountable, for the integrity and effectiveness of arrangements described in this policy.
2. Every Student and Lecturer will, as an output of the annual timetable build cycle, receive a Personalised Academic Timetable that meets the following minimum quality standards:
 - i. **Individual**: a distinct timetable for every student and for every lecturer¹²
 - ii. **Relevant**: All events in a timetable are of interest to that student or lecturer
 - iii. **Clear**: All events have an unambiguous title, location, purpose, optionality and teaching resource¹³
 - iv. **Realistic**: no clashes for core modules, no impractical travel, everyone has a seat, room is suitable¹⁴ to module
 - v. **Logical**: all pedagogical dependencies and pre-requisites are met
 - vi. **Annual**: covers the full Academic Year¹⁵
 - vii. **Complete**: includes all Timetabled Events for which the student has enrolled, including placeholders for examination events
 - viii. **Device agnostic**: available via a wide range of mobile devices
 - ix. **Dynamic**: be modifiable after publishing (e.g. for room changes or for timetabled events that are determined during the teaching session¹⁶)

¹² For visiting Lecturers, the Student should “see” the lecturer in the timetable; it is at the discretion of the department whether an electronic timetable is provided to a given visiting lecturer

¹³ One of lecturer, tutors, laboratory assistants or any other staff directly involved in teaching students

¹⁴ For example, “Harvard” layout for business school case teaching

¹⁵ In detail for the current term, and at minimum in outline for subsequent terms (module name and duration)

¹⁶ For example, additional language classes to support international students on discipline specific terminology

- x. **Early:** provided at least 4 weeks prior to student commencement of term or point of enrolment whichever is earlier
3. Every student group and every teaching lecturer will, as early as practicable in the timetable build cycle, have a Viable Academic Timetable entered in the College timetabling system for which:
 - a. All timetabled events are represented
 - b. All pedagogic dependencies are met
 - c. All student groups needed to build the timetable are defined
 - d. Lecturers¹⁷ are assigned to all events, and have no clashes for core modules¹⁸
 - e. Student groups are assigned to all events, and have no clashes for core modules
 - f. All events have a suitable room / location assigned to them, taking into account known accessibility requirements
 4. For each student the College will strive to deliver an Effective Academic Timetable which means:
 - a. Changes to the timetable should always be minimised after publishing
 - b. Teaching times for a particular class should be, wherever possible, consistent within the term
 - c. Teaching rooms for a particular class should be consistent within the term, unless this conflicts with 4b, above.
 - d. Daily provision of a minimum 1 hr. lunch break will be made between 12:00 and 14:00
 - e. Gaps of more than 2 hours will be, where possible minimised
 - f. Incidents of a single 1hr teaching event occurring during a single day will be minimised where possible
 - g. No single teaching event should exceed 3 hours (excluding case studies, fieldwork and laboratory sessions)
 - h. The choice of clash-free elective modules will be maximised
 - i. The duration of consecutive teaching events should not exceed 4 hours (excluding case studies, fieldwork and laboratory sessions)
 - j. Room allocations will account for travel time between buildings / campuses
 - k. There should be a maximum of 1 campus change in any teaching day except where notified in advance; and 0 campus changes for teaching at Silwood campus
 - l. A minimum of 80% of timetabled activities for 1st year and 2nd year students should occur in, or adjacent to¹⁹ the student's Home Department-preferred spaces
 - m. Coursework deadlines, assessments, feedback dates and student-staff liaison meetings should be incorporated into timetables
 5. For each Lecturer the College will strive to deliver an Effective Academic Timetable which means:
 - a. Fixed, immovable research obligations (e.g., multi-Institution grant linked research governance committees) will be treated as an Anchor Event for the purposes of scheduling taught classes
 - b. Changes to the Timetable will be minimised after publishing
 - c. Teaching rooms for a particular class should be consistent within the term

¹⁷ Lecturer assignments may be provisional or tbc, particularly during the early part of timetable build

¹⁸ Including that the time should be within agreed working hours, and meet Athena Swann criteria

¹⁹ Meaning in teaching spaces hosted by a department that is physically adjacent to student home department

- d. Daily provision of a minimum 1 hr. lunch break will be made between 12:00 and 14:00
 - e. No single teaching event should exceed 3 hours (excluding case studies, fieldwork and laboratory sessions)
 - f. The duration of consecutive teaching events should not exceed 3 hours (excluding case studies, fieldwork and laboratory sessions)
 - g. Lecturer preferences and responsibilities²⁰ will be accommodated wherever possible so long as these preferences do not otherwise impair an Effective Academic Timetable
 - h. Except under extreme, worst case scenarios, lecturers will not be expected to move between campuses to deliver teaching
6. Timetable construction will be coordinated to ensure that the best aggregate outcome for students, lecturers and College is achieved in each annual cycle. This broadly means that at the commencement of each cycle:
- a. There will be a Timetable Build Plan for each academic year that all staff involved in timetabling demonstrably understand and work towards
 - b. Teaching Room Scarcity will be centrally determined each year, informed by cohort sizes, programme teaching patterns, and the available stock of rooms
 - c. The weeks and number of hours requiring contingency provision for arising matters (e.g., short notice re-booking of a disrupted lecture) will be managed centrally
 - d. College Level Events, General Curricular Anchor Events, and Discipline Specific Anchor Events will be overlaid onto the Annual College Calendar to form the initial (i.e., empty) Aggregate Academic Timetable for the year
 - e. The live feed from the Conference & Events Kx system will be enabled.
7. Timetable construction will be sequenced to ensure that the best aggregate outcome for students, lecturers and College is achieved in each annual cycle. The sequence is as follows:
- a. Defined periods of learning and teaching activity that includes examinations, fieldwork, lab weeks and project weeks will be inserted first.
 - b. Timetables will be built progressively, working from most constrained resources to least constrained resources. For most Departments this will be:
 - i. Lecturer availability constraints, typically contractual or non-teaching load related, and that meet agreed situations as follows:
 - 1. NHS clinicians and external speakers
 - 2. Fixed hours (typically aligned to care commitments)
 - 3. Research Institute governance committees
 - 4. Academic Programme governance committees
 - 5. Specific individual situations as agreed by Head of Department or delegated authority
 - ii. Service teaching and cross-programmes teaching²¹
 - iii. Specialist rooms²² in high demand
 - iv. Semi Specialist²³ rooms in high demand
 - v. Lecturers with high teaching load in the term being timetabled

²⁰ The notion of lecturer preferences excludes care commitments, contractual working patterns and such responsibilities as have been agreed by the Head of Department or delegated authority

²¹ Includes BPES, CLCC and CAE teaching

²² As listed in ICLIS

²³ Semi specialist rooms include spaces identified for groups and individuals that have a priority need within that space e.g. hearing loops, computer lab-specific software.

- vi. All other Teaching Rooms and Lecturers
 - c. Iterative development of the initial Aggregate Academic Timetable will then be undertaken to achieve the following Timetable Outcomes in priority order:
 - i. Achieve a Viable Timetable for ALL students and ALL lecturers²⁴
 - ii. Achieve an Effective Timetable for ALL students
 - iii. Achieve an Effective Timetable for ALL lecturers
 - iv. Accommodate expressed preferences from lecturers
 - v. Accommodate expressed preferences from students
8. Standards²⁵ that are applicable to all Academic Timetables are:
- a. Session start times will be on the hour (not 5, 10 or 15 minutes past the hour)
 - b. Session finish times will be 10 minutes before the hour (for session change)
 - c. Module lengths will be in multiples of hours (i.e. no half hour elements), unless there are compelling pedagogic reasons otherwise
 - d. Rooms will be matched to module enrolment with following parameters:
 - i. Nominal target occupancy of 100%
 - ii. Minimum occupancy threshold of 60%, except in cases where there is no other suitable room within the building or adjacent building
 - e. Teaching will be balanced across the Teaching Week in each Academic Term such that, at the relevant level of analysis (e.g. Timetabling Cluster, Centre), the hourly frequency of teaching will be flat or else vary by no more than 10% from the average frequency.
 - f. All Teaching Events will have an event category assigned from the agreed College list of event categories
9. Academic timetables are inherently dynamic, and need to be able to accommodate a wide range of changes and sessions that must be scheduled post commencement in a timely and effective fashion as follows:
- a. Prior to individual student timetable being published:
 - i. All requested changes that would improve the Aggregate Academic Timetable should be accepted
 - ii. Any change that impairs either the viability or the effectiveness of the Aggregate Academic Timetable should be rejected
 - b. After each individual student timetable is published:
 - i. Changes to any module or teaching resource will be reflected in the timetable as soon as practical
 - ii. Changes to student enrolment onto modules, whether elective or core, will be reflected in timetables as soon as practical
 - iii. In all cases, changes to the Aggregate Academic Timetable will be processed within 2 working days of the change being agreed
 - c. As a point of principle, changes that affect published individual student timetables should be minimised, and normally only considered for the following reasons:
 - i. Student enrolment on a module exceeds capacity of allocated room
 - ii. Student advised clash with other credit bearing modules
 - iii. Lecturer advised clash with other scheduled teaching commitments
 - iv. Teaching room failures (e.g. fire alarms, lack of equipment, etc.)

²⁴ Viable timetable requirement for lecturers extends to tutors, laboratory assistants and other staff directly involved in teaching students

²⁵ College has chosen not to apply a policy standard to spreading teaching activity across teaching terms and the teaching year

- v. Allocated room unsuitable for purpose
 - vi. Change of Lecturer due to role change
 - vii. Sickness of Lecturer
 - viii. Displacement of a teaching event due to College level actions²⁶
- d. Changes that result in a trade-off between student groups and / or individual members of staff will be decided based on the best aggregate outcome as judged against Timetable Outcomes and Standards defined in this policy. These include emerging teaching requirements such as remedial or revision sessions; peer-led learning; and activities featuring external guest speakers
 - e. Teaching events that must by necessity be scheduled following session commencement are subject to Personal Academic Timetable quality standards i to ix inclusive (refer to policy item 2 above)
10. All Student and Staff Timetables will be stored and maintained in the College Timetabling System. The following standards apply:
- a. Groups will, in all cases, be used to connect 1 or more students into events
 - b. Teams should be used where appropriate to organise staff allocations onto events
 - c. Every event must have the following data attributes:
 - i. Event category
 - ii. Department responsible for the event
 - iii. Building and room
 - iv. Module
 - d. Every Teaching event must additionally have the following data attributes:
 - i. Group or groups associated to the event
 - ii. Students or groups of students associated to event groups
 - iii. Staff associated to the event
11. Option Streaming will be encouraged wherever practical within the pedagogic considerations of each academic programme. When Option Streaming is in use for a programme, parallel paths on streams should in all cases be timetabled concurrently.
12. Service teaching will be accommodated in each programme and student timetable in an unambiguous way that supports the policy goals of Academic Timetabling.
13. Timetablers must take into account requirements for language teaching (e.g. Year in Europe), so that where these sessions result in clashes, arrangements are put in place to ensure that students are able to meet their learning objectives.
14. Ensuring that the process for building timetables each year runs as smoothly as possible, and achieves the best outcomes for the College requires a high degree of cooperation across the various teams and departments involved:
- a. CTSO will provide clear and timely:
 - i. Publication of the Timetable Build Plan and Global Events
 - ii. Support to all Departments in particular to resolve issues
 - iii. General training and support in relation to systems and processes
 - iv. Definitions of data categories for use during the timetable build
 - v. Data quality exception reporting
 - b. Departments will:
 - i. Provide accurate, timely, and high quality data inputs as required by the Timetable Build Plan and data quality guidance

²⁶ For example, visiting dignitaries, President's events, etc.

- ii. NOT schedule contingency at the Department level
- iii. Act as advocates of the benefits of Personalised Academic Timetables
- iv. Be accountable for the accuracy of all data in Personalised Academic Timetables for students enrolled on their degree programmes²⁷

15. It is expected that any issues that cannot be resolved by application of the principles and policy articulated here, will be resolved in the first instance by the departments/faculties concerned using existing quality control channels. However, for all else, the escalation path for resolution is as follows:

- i. Head of Timetabling
- ii. Academic Registrar
- iii. Provost

16. The College has chosen not to define formal incentives and sanctions that apply to the administration of Academic Timetables. Rather, collegiate practices that facilitate the goals of this policy are encouraged, including:

- a. Adherence to College timetabling deadlines
- b. Ensure that planned occupancy reflects best current estimate
- c. Formally cancelling sessions that are no longer required at the earliest possible time
- d. Ensure that all Timetabled Events are recorded in Celcat
- e. Only booking rooms for clearly identified events

Policy Review

Effective date	01 February 2019
Reviewed by	Craig Walker (Interim Director of CTSO)
Date of next review	01 November 2019

Version history

Version	Effective date	Accountable lead author
1.0	17 March 2015	John Crook
2.1	01 February 2017	John Crook
2.2	01 February 2019	Craig Walker

²⁷ In the case of students enrolled on CLCC “Imperial Horizons”, the Centre is responsible for their allocation to the appropriate modules and groups.