

# CELCAT® Timetabler 7.2 Automation Release Notes

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## 1. Introduction

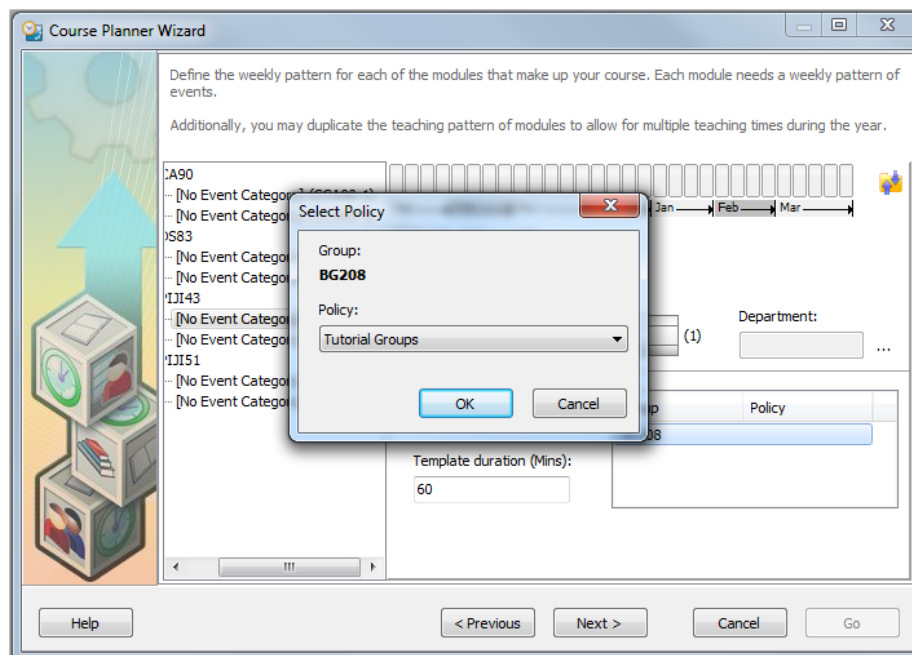
The purpose of this document is to outline the new features of CELCAT *Timetabler* 7.2. This document is not a user guide; it is intended to describe the new or changed features within CELCAT *Timetabler* Automation, comprising the Course Scheduler and Exam Scheduler features.

## 2. Course Planner Wizard Enhancements

### 2.1 Managed Subgroup Policies

A new constraint is available that copies templates and associated constraints where a subgroup is created as a result of a subgroup policy. For example, if a change to a group membership results in the creation of a new subgroup (owing to a subgroup policy), the associated templates and constraints are copied to the new subgroup.

Additionally, the Course Planner Wizard now recognises policies, allowing users to make use of them when creating courses.



*Selecting a policy from within the Course Planner*

### 2.2 Additional Changes to Course Planner

Several additional new features have been incorporated in the Course Planner Wizard to make it easier to create Courses. There is the ability to duplicate individual templates and patterns of templates; templates can now be re-ordered using drag and drop commands; and templates can be renumbered manually if needed.

## 3. New Course Scheduler Engine Constraints

### 3.1 Free Days Constraint

This new constraint allows users to specify how many days must be kept free of events for a given resource. This can be specified for a group or a staff resource, or can be set as a global constraint.

### 3.2 Break Times Constraint

This constraint prevents Staff members or Groups from having too many consecutive Events. Simply specify the minimum number of free minutes that must be scheduled after a set period of

scheduling. This can be set against Groups and Staff individually, or can also be set as a Global constraint.

### 3.3 Event Time Preference Constraint

This Constraint has been extended to permit an unrestricted option for the Day of the Week. Thereby allowing a user to specify a preference for a time without also having to specify a preference for a day.

## 4. New Auxiliary Evaluation within the Results Evaluator

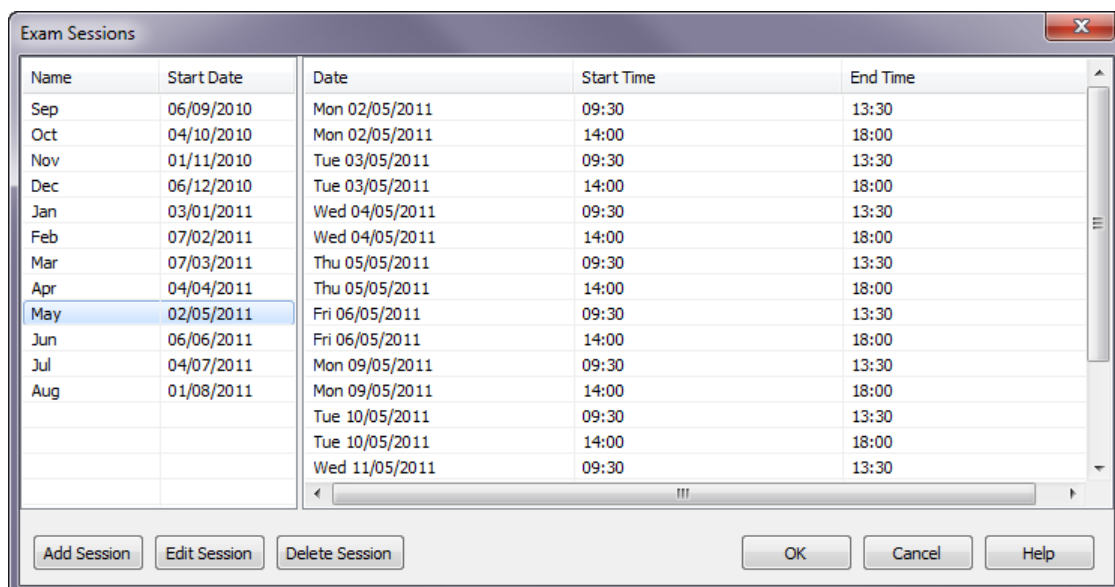
In previous releases of CELCAT *Timetabler 7* an evaluator was included so that once a set of templates had been processed by the course scheduler engine, a user could examine a timetable's statistics and fitness and analyse why a particular template was not scheduled. In the new release, an additional evaluator has been included to allow you to see which non-mandatory constraints have not been met.

## 5. Exam Scheduler

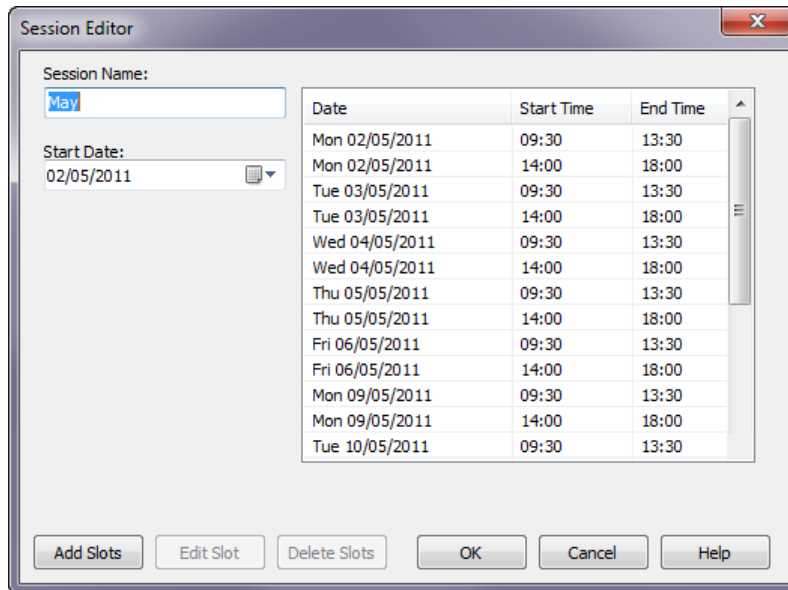
CELCAT *Timetabler* Exam Scheduler is a new feature to automatically schedule whole exam sessions. Users can choose to schedule exams around existing events in the timetable or can schedule exams over the top of existing events. Numerous additional constraints can be assigned globally; to individual exams; individual resources, or sets of exams and resources.

### 5.1 Exam Sessions

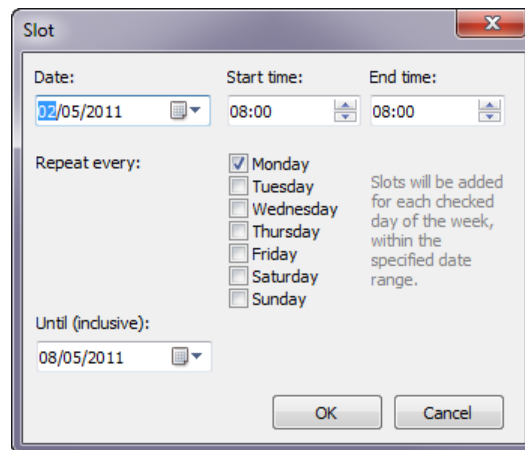
The Exam session window allows you to create, modify and delete exam sessions. An exam session is required before any exam can be created.



*Exam Sessions Window*



*Exam Session Editor*



*Exam Slot Editor*

## 5.2 Exam Editor

The exam editor allows you to create, modify, delete and constrain exams.

The screenshot shows a window titled "Database Systems - Exams [Session: May]". It has three tabs: "Exam", "Constraints", and "Candidates". The "Exam" tab is active. The form contains the following fields and options:

- Session name: May ...
- Name: Database Systems
- Event category: ...
- Unique name: SD2052
- Department: SD ...
- Duration: 100
- Protected
- Suspended
- Registers required
- Notes: (empty text area)
- Custom section with three input fields: Custom 1, Custom 2, and Custom 3.
- Last updated: 19/01/2011 09:06:53  
Administrator

*Exam Editor Window*

### 5.3 Exam Constraint Editor

The Exam Constraint Editor allows you to manage exams and their associated constraints.

Exam Constraints [Session: May]

**Resources**

Primary Name	Secondary ...	Department	Type
Allington ...	ALL	Computing	Room
Alnwick R...	ALN	Textiles an...	Room
Amberley...	AMB	Spanish	Room
Appleby ...	APP	Portuguese	Room
Arundel ...	ARU	Psychology	Room
Chester ...	CHE	Social Policy...	Room
Chipchas...	CHI	Mathematics	Room
Christchu...	CHR	Education	Room
Colchest...	COL	Irish	Room
Compton ...	COM	Italian	Room
Conisbor...	CON	Adult Educa...	Room
Cooling C...	COO	Design	Room
Corfe Ce...	COR	Nursing	Room
Cowdray...	COW	Health Pro...	Room

Selected: 0  
Visible: 14  
Total: 8691

**Exams**

+ Filters: 1

Name	Event category	Duration	Room(s)	Department	Day	Time
AAD2S72 (2D skills)		2h 45m	Kendal Hall	Business a...	Mon 02/0...	14:00:00
AAD3S55 (3D skills)		2h 45m		Business a...	{Unsched...	{Unsched...
AADAOP71 (Aspects of pract...		3h 10m	Bramber R...	Business a...	Thu 05/05...	14:00:00
AADC99 (Consolidation)		4h 00m	Kendal Hall	Business a...	Thu 05/05...	14:00:00
AADC35 (Contextual devel...		2h 10m	Oxford Ro...	Business a...	Mon 02/0...	14:00:00
AADDE61 (Discipline experien...		3h 10m	Bungay Hall	Business a...	Thu 05/05...	14:00:00
AADIC45 (Interpersonal com...		2h 45m		Business a...	{Unsched...	{Unsched...
AADPD37 (Personal develop...		2h 10m	Ludlow Area	Business a...	Mon 02/0...	14:00:00
AADRID95 (Research into dis...		2h 45m	Allington ...	Business a...	Wed 04/0...	14:00:00
AADRIP37 (Research into pr...		2h 10m	Dacre Cen...	Business a...	Wed 04/0...	14:00:00
AADSS32 (Study skills)		4h 00m	Bowes Room	Business a...	Thu 05/05...	14:00:00
AAFA73 (Accounting)		2h 25m		Communic...	{Unsched...	{Unsched...
AAFafb46 (Accounting for b...		1h 10m		Communic...	{Unsched...	{Unsched...
AAFBEAF65 (Business econ...		2h 05m	Bamburgh...	Communic...	Fri 06/05 (...)	09:30:00
AAFFA49 (Financial accounting)		0h 55m	Colcheste...	Communic...	Tue 10/05...	14:00:00
AAFIFAI20 (Issues in Financ...		1h 40m	Farnham ...	Communic...	Fri 06/05 (...)	09:30:00
AAFITA66 (Introduction to a...		3h 05m		Communic...	{Unsched...	{Unsched...
AAFMA33 (Management acco...		0h 55m	Carisbroo...	Communic...	Tue 10/05...	14:00:00
AAFPOFAI45 (Principles of fi...		1h 10m	Bungay Hall	Communic...	Tue 10/05...	14:00:00
AAFQM47 (Quantitative met...		3h 05m		Communic...	{Unsched...	{Unsched...
ABACsAB23 (Agricultural biot...		2h 05m	Dudley Ro...	Business a...	Thu 05/05...	09:30:00

Selected: 0  
Visible: 1044  
Total: 1044

**Exam Constraints**

+ Filters: 0

Name	Affects	Type	Prefer...	Parame...	Parame...	Parame...	Detail
Exa...	AAD2S72	Exam					Studen...
Exa...	AAD2S72	Exam					-100: F...
Exa...	AAD3S55	Exam					-100: F...
Exa...	AADA...	Exam					Studen...
Exa...	AADA...	Exam					PC x 2
Exa...	AADC99	Exam					Studen...
Exa...	AADC35	Exam					Studen...

Selected: 0  
Visible: 1899  
Total: 1901

**Exam Constraint Detail**

Exam candidates (enrolment) (Exam: AADC99)

Name
x Student2760
x Student4620
x Student5928
x Student8009

### Exam Constraints Editor

#### Resource Panel

The Resource Panel is used to manage the resources (module, room, staff, student). You can select resources in order to filter the exams.

Primary Name	Secondary Name	Department	Type
<input type="checkbox"/> Allington Room	ALL	Computing	Room
<input type="checkbox"/> Alnwick Room	ALN	Textiles and Fa...	Room
<input type="checkbox"/> Amberley Room	AMB	Spanish	Room
<input type="checkbox"/> Appleby Hall	APP	Portuguese	Room
<input type="checkbox"/> Arundel Room	ARU	Psychology	Room
<input type="checkbox"/> Chester Centre	CHE	Social Policy & ...	Room
<input type="checkbox"/> Chipchase R...	CHI	Mathematics	Room
<input type="checkbox"/> Christchurch ...	CHR	Education	Room
<input type="checkbox"/> Colchester R...	COL	Irish	Room
<input type="checkbox"/> Compton Room	COM	Italian	Room
<input type="checkbox"/> Conisboroug...	CON	Adult Education...	Room
<input type="checkbox"/> Cooling Centre	COO	Design	Room
<input checked="" type="checkbox"/> Corfe Centre	COR	Nursing	Room
<input type="checkbox"/> Cowdray Room	COW	Health Promotion	Room

Selected: 1  
Visible: 14  
Total: 8691

*Resources Panel*

### Exam Constraint Panel

The Exam Constraint Panel is used to create and manage constraints, and to apply them to resources and exams. Users can add, modify and delete constraints within this panel. The constraints can be filtered by global constraints, selected exams and selected resources.

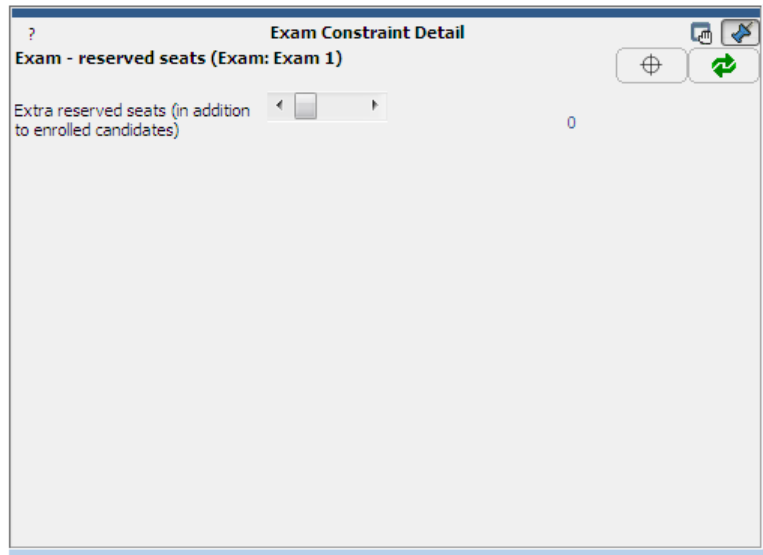
Name	Affects	Type	Pre...	Parameter1	Par...	Par...	Detail
<input type="checkbox"/> Exam - reserved seats	Exam 1	Exam		0 - Extra...			

Selected: 0  
Visible: 1  
Total: 1

*Exam Constraints*

### Exam Constraint Detail Panel

The Exam Constraint Detail Panel is used to edit the constraint after it has been added to an exam. It allows you to adjust the strength of a constraint or adjust other constraints parameters.



*Exam Constraint Detail*

## 5.4 Exam Schedule

### Schedule Tab

The Schedule Tab contains the exam schedule for each available room. Users can drag and drop an exam on any available room or slot. Information is displayed in the Information panel if the room is unsuitable for the selected exam.

Room	Mon 02/05 09:30-13:30	Mon 02/05 14:00-18:00	Tue 03/05 09:30-13:30
Allington Room [50]	Used 1/50 HP103 [1*]	Used 1/50 HPPHIPP12 [1*]	Used 1/50 GGLM97 [1*]
Alnwick Room [79]	Used 1/79 NIPIIIC71 [1*]	Used 1/79 NCH26 [1*]	Used 1/79 ICIATIOT1C28 [1]
Amberley Room [36]	Used 1/36 VCI133 [1*]	Used 1/36 HEP215 [1]	Used 1/36 BSIC105 [1*]
Appleby Hall [31]	Used 1/31 CTOAI89 [1]	Used 1/31 HNND16 [1]	Used 1/31 NPOEC31 [1*]
Arundel Room [48]	Used 5/48 ESCE19 [4] SE1101+25PC [1]	Used 1/48 HPPHIPP12 [1*]	Used 1/48 BSIC105 [1*]
Bamburgh Centre [59]	Used 17/59 EAAFLUIEFAP50 [17]	Used 11/59 ETSGOIN83 [11]	Used 16/59 MSPCI60 [16]
Barnard Room [68]	Used 17/68 MSESIE73 [17]	Used 7/68 ELASIIAI41 [7]	Used 6/68 HNPFTM46 [6]
Beeston Room [21]	Used 12/21 VCI133 [12*]	Used 3/21 BSCADM11 [3]	Used 9/21 TAFDCAD35 [9]
Berkeley Centre [??]	Used 8/?? FAAAWAR1DIVC25 [8]	Used 15/?? HPPHIPPIN44 [15]	Used 5/?? VCHC64 [5]
Bodiam Room [39]	Used 2/39 FAAAIS88 [2]	Used 8/39 SAIS210 [8]	Used 5/39 TAFDFAF75 [5]
Bolton Room [36]	Used 7/36 SE1101+PC [7]	Used 28/36 SSF1508 [28]	Used 3/36 IILAL695 [3]
Bowes Room [62]	Used 28/62 SE1101+25 [28]	Used 3/62 BAMSCB40 [3]	Used 2/62 ABACSNE87 [2]
Bramber Room [61]	Used 7/61 EAAFLTFSNS232 [7]	Used 3/61 BSRDTAO18 [3]	Used 2/61 CMLADM38 [2]
Bramber Room/Exam [20]	Used 0/20	Used 0/20	Used 0/20
Brough Room [55]	Used 3/55 EAAFLPFUFCIEF83 [3]	Used 3/55 ITLOIPW68 [3]	Used 2/55 MSNC94 [2]
Bunby Hall [47]	Used 6/47	Used 7/47	Used 15/47

*Schedule Tab*

### Evaluation Tab

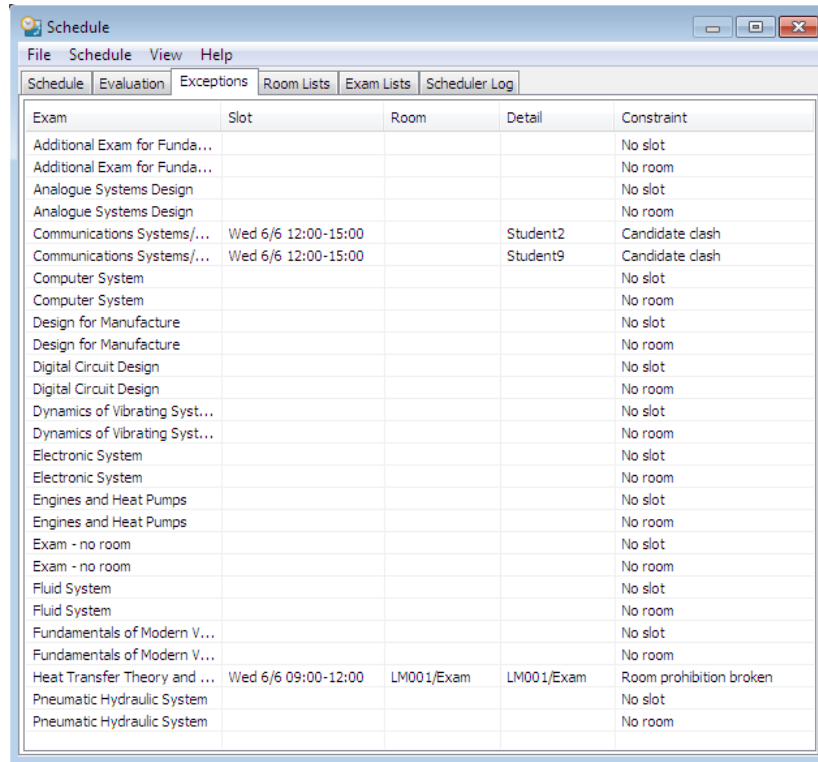
The Evaluation Tab shows Statistics and Fitness information for the exam schedule.

Schedule			
File Schedule View Help			
Schedule Evaluation Exceptions Room Lists Exam Lists Scheduler Log			
Statistics		Fitness	
No. exams:	775	Average time between exams (hours):	50:54
Exams allocated slots:	775 100.00%	Slot penalty per exam:	0.00
Exams fully roomed:	775 100.00%	Room penalty per exam:	0.00
Exams split across rooms:	56 7.23%	Unused room/slots:	1129
Candidate dashes:	0 0.00%		
Less than min. gap between exams:	0 0.00%		
Candidates with no seat:	0 0.00%		
Candidates seated but not in exam:	0 0.00%		
Reserved seats unallocated:	0 0.00%		
Additional seats reserved:	0 0.00%		
Exams overrunning slot duration:	0 0.00%		
Exams ignoring offset times:	0 0.00%		
Room slots ignoring usage policy:	2 0.10%		
Room slots used beyond their capacity:	121 5.87%		
Room slots using multiple layouts:	0 0.00%		
Exams ignoring mandated rooms:	0 0.00%		
Exams ignoring prohibited rooms:	292 37.68%		
Exams ignoring mandated slots:	0 0.00%		
Exams ignoring prohibited slots:	0 0.00%		
Ignored mandated exam coincidences:	0 0.00%		
Ignored prohibited exam coincidences:	0 0.00%		
Ignored mandated exam co-locations:	0 0.00%		
Ignored prohibited exam co-locations:	0 0.00%		
Ignored mandated exam orderings:	0 0.00%		
Insufficient travel time:	0 0.00%		
Ignored mandated room coincidences:	0 0.00%		
Ignored prohibited room coincidences:	0 0.00%		

*Evaluation Tab*

## Exceptions Tab

The Exceptions Tab shows which exams have broken their assigned constraints and displays the reasons why they have been broken. It also displays the reasons why specific exams have not been scheduled.

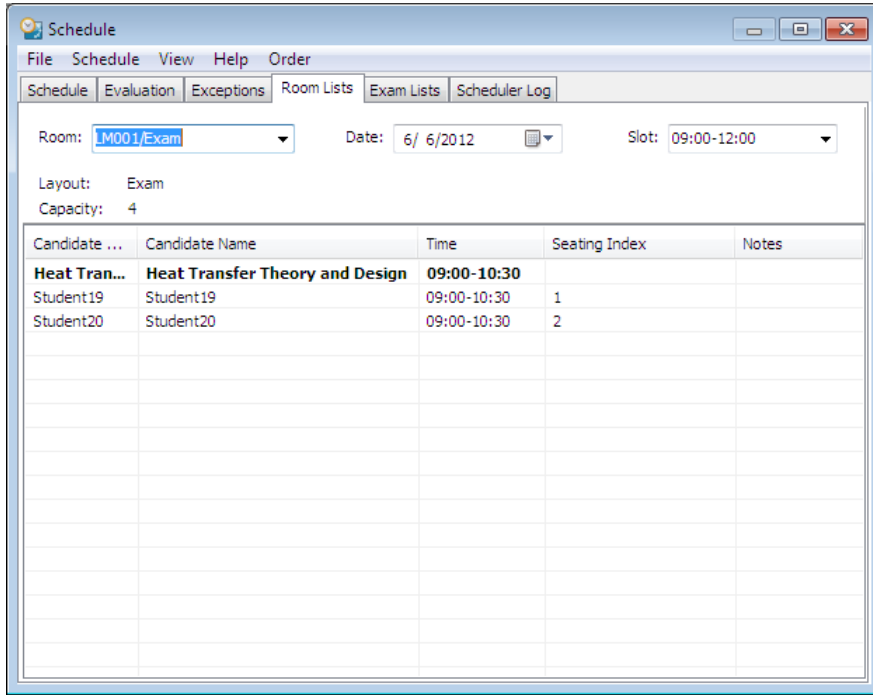


Exam	Slot	Room	Detail	Constraint
Additional Exam for Funda...				No slot
Additional Exam for Funda...				No room
Analogue Systems Design				No slot
Analogue Systems Design				No room
Communications Systems/...	Wed 6/6 12:00-15:00		Student2	Candidate clash
Communications Systems/...	Wed 6/6 12:00-15:00		Student9	Candidate clash
Computer System				No slot
Computer System				No room
Design for Manufacture				No slot
Design for Manufacture				No room
Digital Circuit Design				No slot
Digital Circuit Design				No room
Dynamics of Vibrating Syst...				No slot
Dynamics of Vibrating Syst...				No room
Electronic System				No slot
Electronic System				No room
Engines and Heat Pumps				No slot
Engines and Heat Pumps				No room
Exam - no room				No slot
Exam - no room				No room
Fluid System				No slot
Fluid System				No room
Fundamentals of Modern V...				No slot
Fundamentals of Modern V...				No room
Heat Transfer Theory and ...	Wed 6/6 09:00-12:00	LM001/Exam	LM001/Exam	Room prohibition broken
Pneumatic Hydraulic System				No slot
Pneumatic Hydraulic System				No room

*Exceptions Tab*

## Room Lists Tab

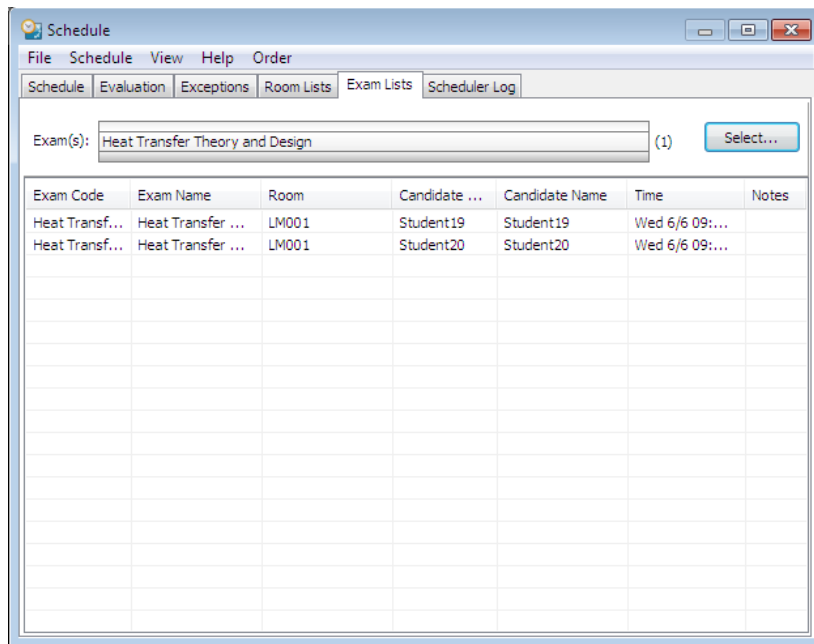
The Room Lists Tab shows which exams have been scheduled against a specified room. It also allows you to filter the results by date and slot.



*Room Lists tab*

### Exam List Tab

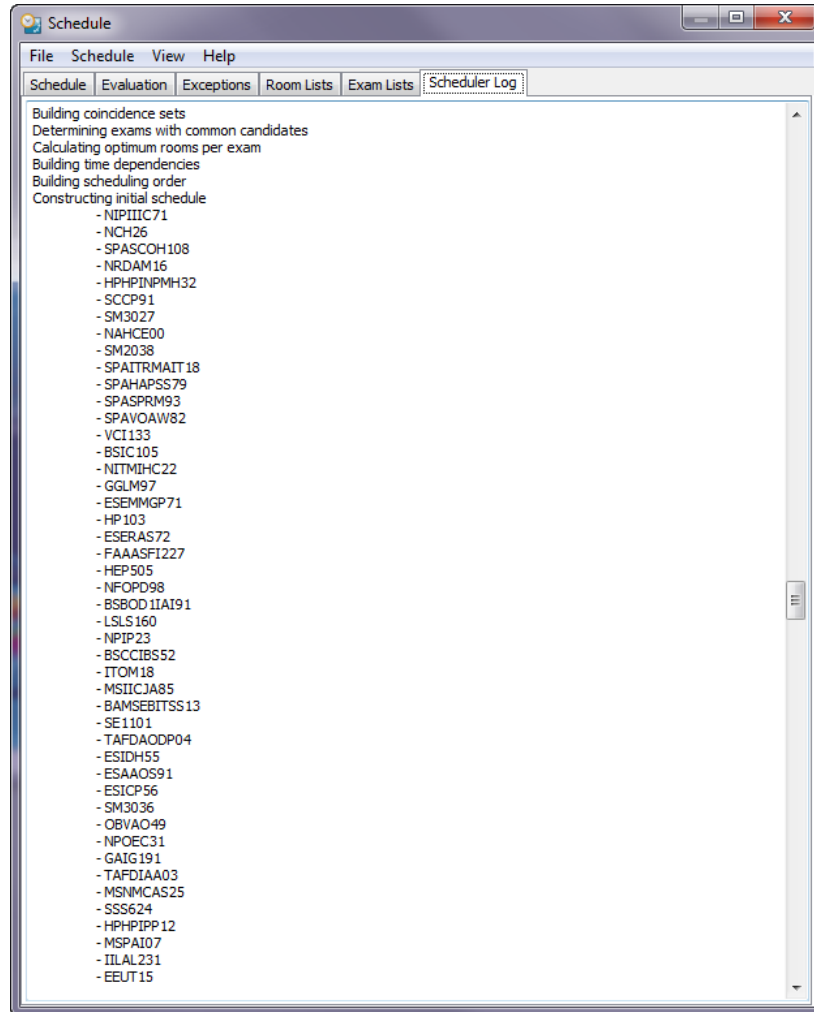
The Exam Lists Tab shows the schedule information for one or more exams.



*Exam Lists Tab*

## Exam Schedule Log Tab

The Scheduler Log Tab displays a log of activity during the last engine run.



*Exam Scheduler Log Tab*