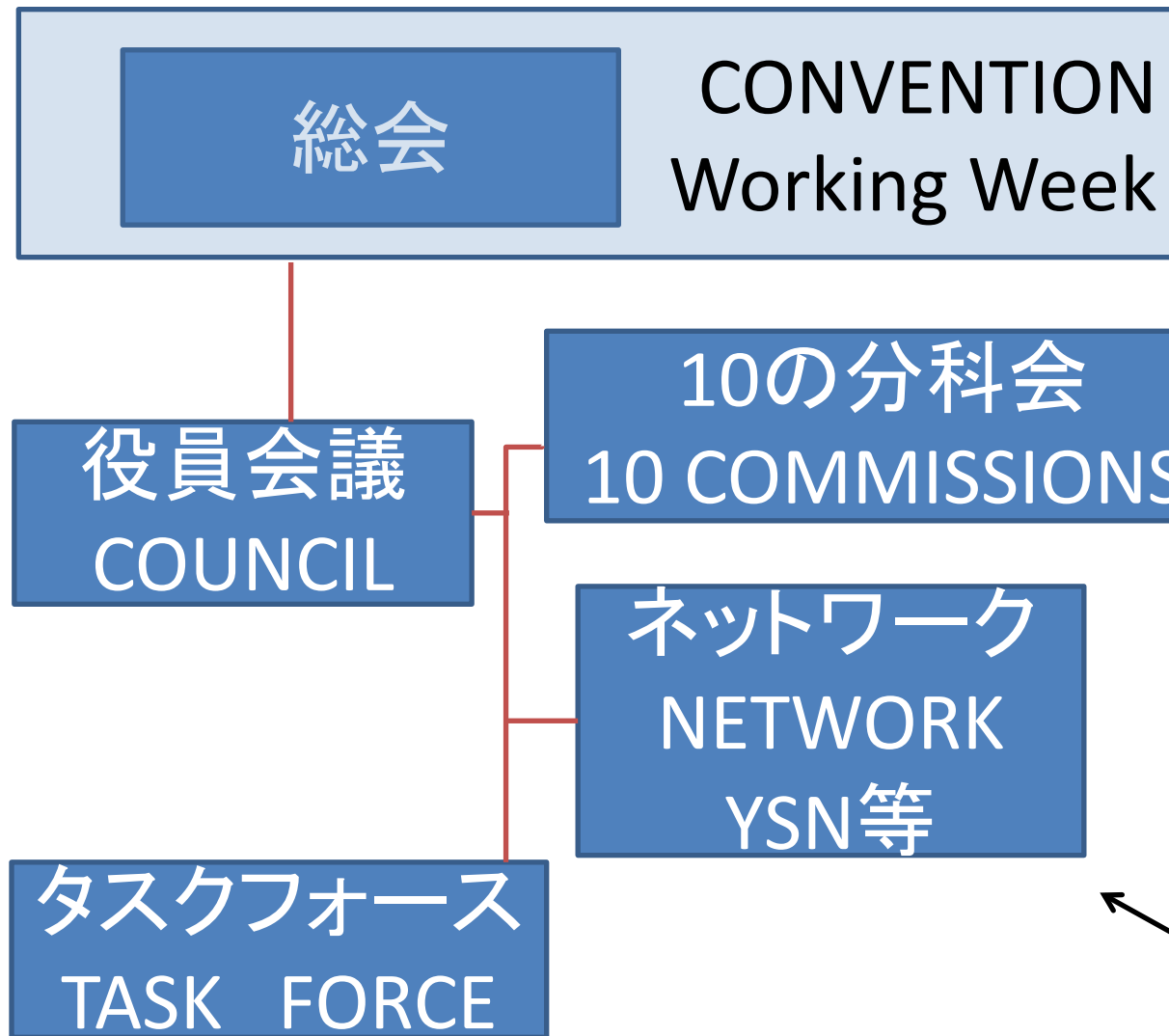
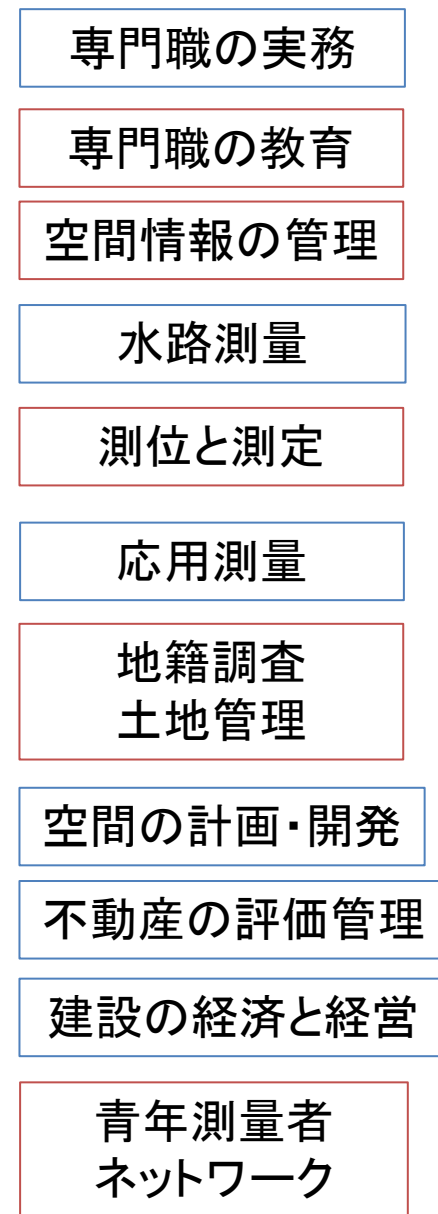




FIGの組織



JFS



Commission 2の活動報告及び e-learningの試験的利用(2)

第2分科会(専門職の教育)委員長
中堀義郎(日本測量協会)

報告のアウトライン

- Commission 2の活動
 - Commission 2の概要
 - クライストチャーチでのFIG作業週間におけるテクニカルセッション
 - ヘルシンキでのFIG作業週間におけるテクニカルセッションの予定
- e-learningの試験的利用
 - クライストチャーチでの発表概要＋その後の成果

FIG Commission2の目標

- 次の活動により職業者の測量教育の良好な実践を促進する。
 - － 測量の社会ニーズを発見し、大学等がそれに応える仕組みと手順を開発できるよう支援する。
 - － 重要な新しい測量知識を特定し測量教育の進歩を促す。
 - － 測量教育及び研究への協力企業の新規参入を促進する。
 - － 途上国における測量教育人材の育成を支援する。
 - － 関連機関との連携を強化する。

Commission 2 WG

Working group 2.1 – Towards educating the land professional (土地専門家の教育に向けて)

Working Group 2.2 – Innovative learning and teaching (革新的な学習と授業)

Working Group 2.3 – Demand for and supply of Professional Education (職業者教育の需要と供給)

Working Group 2.4 - Accreditation and Quality Assurance (認定と品質保証)

クライストチャーチ大会での テクニカルセッション

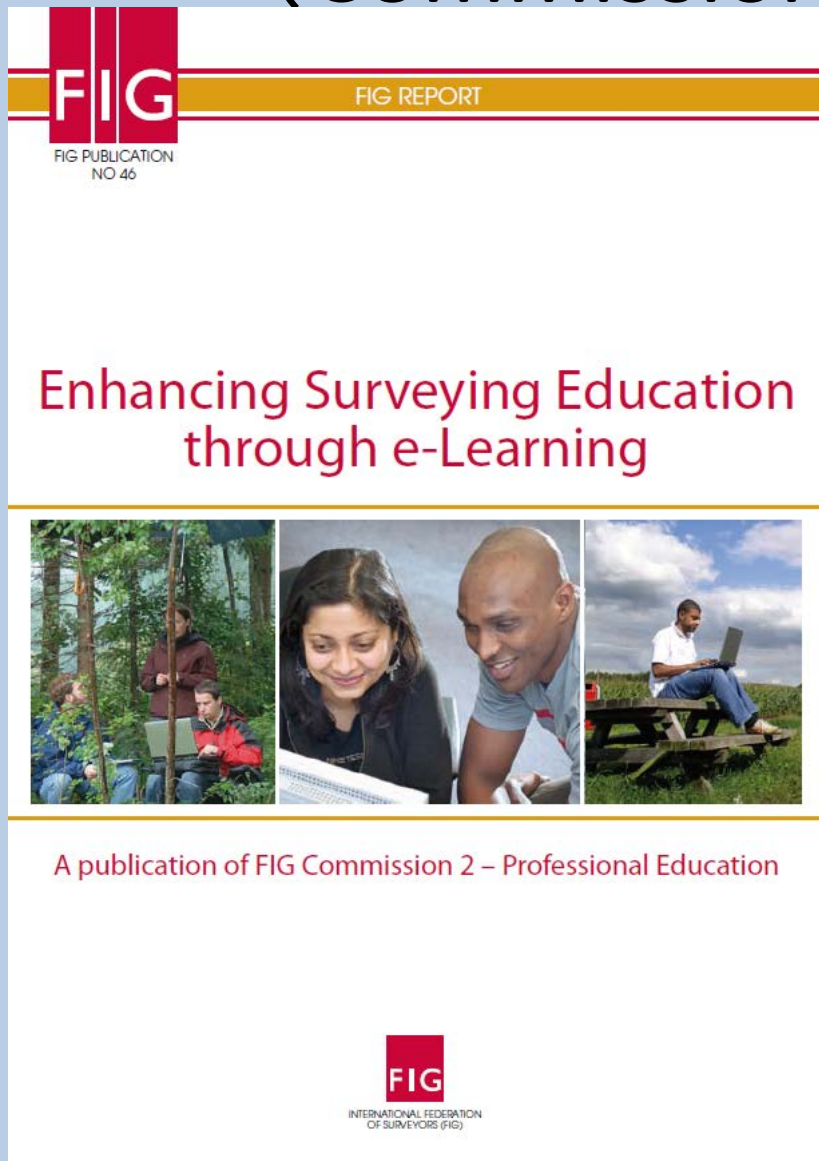
- セッション1 「Enhancing Surveying Education」
 1. Sustainable Surveying Education in South Australia
南オーストラリア大学は、学生減少のため2006年に測量学科の学部学生を募集停止にした。州内の地籍調査のために必要な測量者を確保するため、企業が大学と協働し、教育にも財政的にも支援を行うMaster of Surveyingという新しい教育モデルを作り出した。
 2. Understanding Impacts and Professional Obligations to Society: Preparing Geomatics Engineers for the 21st Centur
 3. Earthquake Disaster Response Preparation for Schoolchildren in Metropolitan Bandung, Indonesia

詳細は、プロシーディングス参照

http://www.fig.net/resources/proceedings/fig_proceedings/fig2016/techprog.htm

- セッション2 「Teaching and Learning for the Future」
 1. Distance Learning in the Education of Surveying Engineers
 2. The AHSCP Certification Scheme - Achievements and The Future
 3. Building Information Management and Modelling Teaching in Geospatial Engineering, Civil Engineering and Architecture
 4. Teaching BIM to Geomatics Students
 - BIMを新たな測量科目として教えるためのカリキュラム開発に関する発表
 5. Experimental use of WEBCCLASS
 6. Developing Capacity for Land Reforms to Geospatial competencies and Education

FIG Publication 64 (2010) (Commission2 の出版物)



目次

まえがき
はじめに

- 1 E-learningの概念
- 2 E-learningの特性
- 3 E-learning 技術とインフラ
- 4 効果的な e-learning
- 5 測量における e-learning の役割
- 6 E-learningに関するFIGのポリシー

参考文献

好事例1: UN IGIS

好事例2: ESR I – The Virtual Campus

Experimental Use of WebClass

Yoshiro Nakahori

Visiting Prof. Saitama University,
Department of Civil Engineering
Consultant, Japan Association of Surveyors

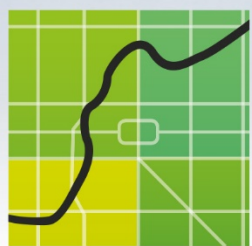


FIG Working Week 2016

CHRISTCHURCH, NEW ZEALAND 2-6 MAY 2016

Recovery

from disaster

Organised by



Platinum Partners



Diamond Partner





Content

- Background
- What is the WebClass?
- How I used it as the first step
- Why is e-learning important in future?
- Next step



FIG Working Week 2016


CHRISTCHURCH, NEW ZEALAND 2-6 MAY 2016

Recovery

from disaster

Education Affair Management System

Last Login: 4/25/2016 4:58:19 PM 2016年4月26日 10:36:24

[Logout](#) Font size: [S](#) [M](#) [L](#) [日本語](#) | [English](#) 

Nakahori, Yoshiro

[Top page](#) [Messages](#) [Grades information](#) [Syllabi](#) [Supervised students](#) [web class](#)

[Class Information](#) [Que. Responses](#) [Que. Results](#) [Lost/found items](#) [Login history](#)

[Messages](#) [Manual](#)
 You have [0 new messages](#)

[Jump to selected date](#) [Refresh](#) [Previous week](#) [Next week](#)

Schedule table							
	4/18 (Mon)	4/19 (Tue)	4/20 (Wed)	4/21 (Thr)	4/22 (Fri)	4/23 (Sat)	4/24 (Sun)
08:00							
09:00							
10:00							
11:00							
12:00							
13:00							
14:00							
15:00							
16:00							
17:00							
18:00							
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21:00							
22:00							
23:00							
24:00							

mesReceive.aspx



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What is WebClass?

- Commercial e-learning system created for Japanese universities by DATA PACIFIC (JAPAN) LTD
- User : 93 universities (as of Aug. 2015) including Saitama University
- Class support system
- Learning Management System as stated in the FIG Publication 46 p15-16.
- Accessible with PC, smart phones and tablets



FIG Working Week 2016

CHRISTCHURCH, NEW ZEALAND 2-6 MAY 2016

Recovery

from disaster

Top page of WebClass

» Logout Login as a Student

> Course Selection

» Course list

中堀 義郎 is logged in.

User Management

» Account Alteration

» Switch to smart-phone view

Link

» Notices from administrator [New message](#)

Newest top 5 (total: 0)

No Notices [» Notices](#)

Class Schedule Table 2015 3rd-4th [» Back to today's schedule](#)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1st						
2nd						
3rd					» 測量学 I	
4th					» 測量学実習	
5th						
6th						
7th						
8th						

» Manuals are downloadable.



FIG Working Week 2016

CHRISTCHURCH, NEW ZEALAND 2-6 MAY 2016

Recovery

from disaster

Course Menu and Contents List

» Logout Login as a Student Message My reports Notebook

» Course Selection > Course Menu

» 測量学実習

中堀 義郎 is logged in.

- [+] Contents Management
- [+] Attendance Management
- [+] Record Management
- [+] User Management
- [+] Course Management
- [+] e-Portfolio
- [+] Study Card

» Notices from administrator New message

Newest top 5 (total: 0)
No Notices » Notices » Manage

Contents list
» Textbook » Assessment

Unit » Create New » Edit/Delete » List arrangement
» Top of this page

Forum » Create New » Edit/Delete » List arrangement
» Top of this page

Textbook » Create New » Edit/Delete » List arrangement

- » 器高式水準測量手簿 中堀 義郎 2015-11-06 16:19:19 » Edit » History[115]
- » 埼玉大学基準点成果表 中堀 義郎 2015-11-06 16:10:22 » Edit » History[180]
- This contents is for limited users. » Show target users
○ Course Manager can access unlimited times
- » 多角測量レポート作成上の注意点及び閉合差の処理について 中堀 義郎 2015-12-14 17:18:44 » Edit » History[200]
- » 測量学実習テキストPart 2 中堀 義郎 2015-10-14 15:53:30 » Edit » History[318]
- » 測量学実習テキスト part 3 中堀 義郎 2015-11-12 20:08:56 » Edit » History[338]
- » 測量学実習テキスト Part1 中堀 義郎 2015-10-01 11:42:15 » Edit » History[278]

» Manuals are downloadable.



FIG Working Week 2016

CHRISTCHURCH, NEW ZEALAND 2-6 MAY 2016

Recovery

» Logout Login as a Student Message My reports Notebook Disaster

» Course Selection > Course Menu

» 測量学実習

中堀 義郎 is logged in.

- [+] Contents Management
- [+] Attendance Management
- [+] Record Management
- [+] User Management
- [+] Course Management
- [+] e-Portfolio
- [+] Study Card

Assessment » Create New » Edit/Delete » List arrangement

- » レポート再提出 中堀 義郎 2015-11-13 15:32:53 » Edit » History[6]
 - Valid Period(d/m/y) [13/11/2015 15:29 - 13/11/2015 23:59]
 - Course Manager can access unlimited times
- » 多角測量 中堀 義郎 2015-12-13 10:30:58 » Edit » History[102]
 - Valid Period(d/m/y) [13/12/2015 10:25 - 28/12/2015 23:59]
 - Course Manager can access unlimited times
- » 水準測量 中堀 義郎 2015-11-11 14:30:59 » Edit » History[127]
 - Valid Period(d/m/y) [11/11/2015 14:29 - 13/11/2015 12:30]
 - Course Manager can access unlimited times
- » 第2回実習レポート 中堀 義郎 2015-10-11 20:48:56 » Edit » History[167]
 - Valid Period(d/m/y) [11/10/2015 20:27 - 10/10/2015 12:30]
 - This contents is for limited users. » Show target users
 - Course Manager can access unlimited times
- » 第2回実習レポート その2 中堀 義郎 2015-10-11 20:52:55 » Edit History[0]
 - Valid Period(d/m/y) [11/10/2015 20:49 - 16/10/2015 12:30]
 - This contents is for limited users. » Show target users
 - Course Manager can access unlimited times
- » 第3回実習レポート 中堀 義郎 2015-10-14 16:08:03 » Edit » History[98]
 - Valid Period(d/m/y) [16/10/2015 17:50 - 23/10/2015 12:30]
 - This contents is for limited users. » Show target users
 - Course Manager can access unlimited times
- » 第4回実習レポート 中堀 義郎 2015-10-29 22:42:51 » Edit » History[82]
 - Valid Period(d/m/y) [28/10/2015 23:02 - 30/10/2015 23:59]
 - This contents is for limited users. » Show target users
 - Course Manager can access unlimited times
- » 第5回実習レポート 中堀 義郎 2015-11-05 10:46:31 » Edit » History[72]
 - Valid Period(d/m/y) [30/10/2015 18:00 - 06/11/2015 12:30]
 - This contents is for limited users. » Show target users
 - Course Manager can access unlimited times

» Manuals are downloadable.



NZIS



partner

Information
New Zealand
Teitū te whenua



Content Management System (1)

- Create textbook(teacher)
 - ✓ Prepare and upload textbooks anytime and anywhere
 - ✓ Saving time because of no printing handout
 - ✓ Hard work to prepare textbooks
- Access to textbooks anytime and anywhere (student)
 - ✓ Study textbooks before, after and during sessions
 - ✓ Convenient to refer to textbooks during surveying practice outside
 - ✓ Not losing textbooks like printed materials
 - ✓ No need to carry a heavy textbooks



Content Management System (2)

- Create Assessment (teacher)
 - ✓ questions are alternative type and answers are automatically graded
 - ✓ Hard work to prepare questions
- Tackle questions (student)
 - ✓ Check the result of grading immediately
 - ✓ Review textbooks for self-teaching



Record Management System

- Checking the detailed scores, question by question, student by student, is easy
- Submit reports (student)
 - Submit reports anywhere and anytime
- Download and evaluate reports (teacher)
 - No need to carry heavy paper home
 - Read reports, make comments and grade at my convenience even on my commute using a smart phone
 - Work load significantly reduced



User Management System

- Manage record of learning
 - Check use time of content (access log)
 - Check progress summary
 - Check score summary
- More functions would be tried in future
 - ◆ For example
 - Group setting → Collaborative learning



FIG Working Week 2016

CHRISTCHURCH, NEW ZEALAND 2-6 MAY 2016

Recovery

from disaster

Progress Summary

Progress Summary - 測量学実習 » Close this window

Summaries

Execute Count Summary
 Talled up at 2016-04-29 16:02:49, Period 2015-9-20 2016-4-29
 » Download Progress Summary

Mail	User Name	User ID	Numeric part	器高	玉大	多角	測量	測量	測量	自主	鋼卷	レポ	多角	水準	第2	第2	第3	第4	第5	第6	第7	第8	第9	第10	第11
				式水	学基	角測	学実	学実	学実	尺測	ート	測測	回実	回実	回実	回実	回実	回実	回実	回実	回実	回実	回実	回実	回実
<input checked="" type="checkbox"/>				[2]	--	[2]	[2]	[5]	[3]	[2]	--	[2]	--	--	--	--	--	[2]	[1]	--	[3]	[1]	[1]	[1]	--
<input checked="" type="checkbox"/>				[1]	[2]	[4]	[6]	[10]	[4]	[1]	[2]	--	--	[3]	--	--	[2]	[2]	[2]	[3]	[2]	[2]	[1]	[2]	
<input checked="" type="checkbox"/>				[1]	[6]	[4]	[7]	[9]	[3]	[1]	[2]	--	[2]	[1]	[4]	--	[2]	--	[1]	--	[1]	[1]	[1]	[10]	
<input checked="" type="checkbox"/>				[1]	[1]	[4]	[5]	[5]	[5]	[3]	[1]	--	[1]	[1]	[1]	--	[1]	--	[1]	[1]	--	--	[1]	[1]	--
<input checked="" type="checkbox"/>				[1]	[4]	[3]	[1]	[3]	[2]	--	[5]	--	[3]	[2]	--	--	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]
<input checked="" type="checkbox"/>				--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<input checked="" type="checkbox"/>				--	[3]	[3]	[8]	[9]	[4]	[2]	[2]	--	[4]	[2]	[3]	--	[1]	[1]	[3]	--	[1]	[1]	[1]	[1]	--
<input checked="" type="checkbox"/>				[2]	[4]	[3]	[1]	[4]	[2]	[5]	[2]	--	[1]	[2]	[2]	--	[2]	[1]	[2]	[1]	[1]	[1]	[1]	[2]	[1]
<input checked="" type="checkbox"/>				[2]	[4]	[9]	[5]	[6]	[2]	[2]	[4]	--	[1]	[2]	[2]	--	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]
<input checked="" type="checkbox"/>				[4]	[2]	[3]	[4]	[11]	[4]	[4]	[1]	--	[3]	[2]	[2]	--	[1]	[1]	[2]	[1]	[1]	[1]	[2]	[1]	[1]
<input checked="" type="checkbox"/>				[1]	[2]	[1]	[2]	[4]	[2]	[1]	[1]	--	[2]	[2]	[1]	--	[2]	[1]	[1]	[2]	[1]	[1]	[1]	[1]	[1]
<input checked="" type="checkbox"/>				[4]	[2]	[5]	[8]	[13]	[1]	[2]	[1]	--	[3]	[4]	[2]	--	--	[1]	--	[2]	[1]	[2]	--	[1]	[1]
<input checked="" type="checkbox"/>				[2]	[1]	[2]	[2]	[1]	[4]	[2]	[3]	--	[2]	[2]	[3]	--	[2]	[2]	[1]	[2]	[2]	[1]	[1]	[1]	[1]
<input checked="" type="checkbox"/>				--	--	[2]	[5]	[7]	[6]	[2]	[2]	--	[1]	[1]	[2]	--	--	--	--	[1]	[3]	[1]	[1]	--	[1]



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FIG Working Week 2016

CHRISTCHURCH, NEW ZEALAND 2-6 MAY 2016

Recovery

from disaster

Access Log

» Logout Login as a Student Message My reports Notebook

» Course Selection > Course Menu

» 測量学 II

中堀 義郎 is logged in.

[+] Contents Management

[+] Attendance Management

[+] Record Management

[] User Management

» Register / Modify / Remove

» Group Setting

» Login Status

» Members List / Access Log

» Account Alteration

[+] Course Management

[+] e-Portfolio

[+] Study Card

» Manuals are downloadable.

Member List / Access Log

[測量学 II]

The list of members in this course and the course's usage log can be inspected.

User ID Search Show all logs

Pattern matching: Wild card * one character ?
Use ' or ' to connect conditions.

Current members : author (1) user (51)

» Download with csv file

Course Members

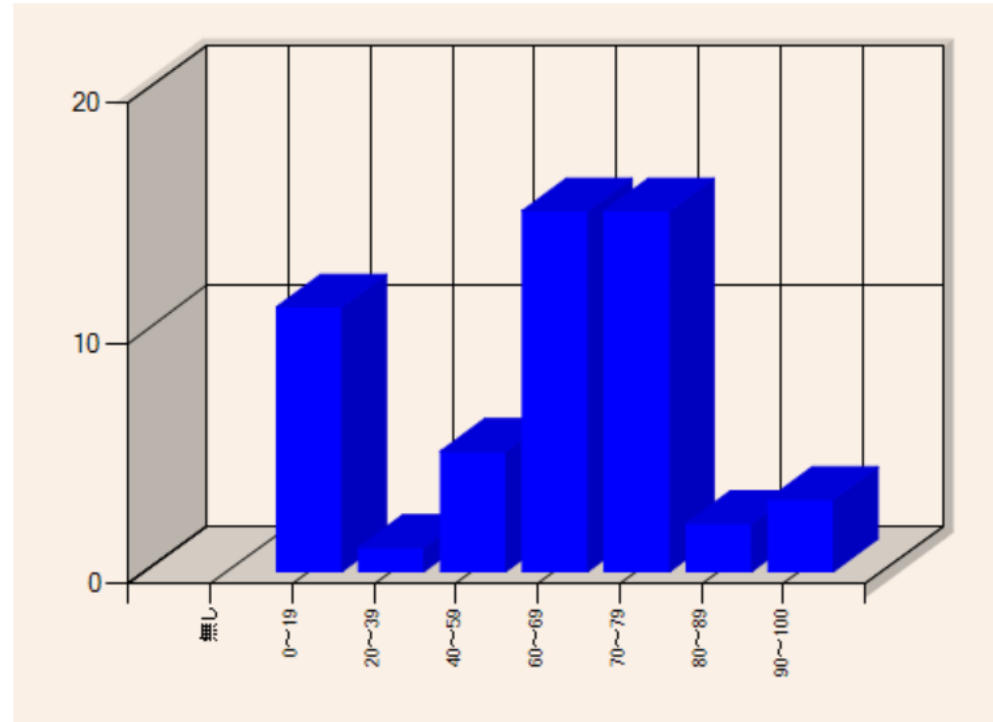
User Name	User ID Numeric part	Authority	Number of Logins	Total Login Time	Detailed log
中堀 義郎	00003961	Author	40	10:22:21	Details
		User	1	00:02:05	Details
		User	0	00:00:00	Details
		User	0	00:00:00	Details
		User	7	00:06:23	Details
		User	1	00:00:00	Details
		User	0	00:00:00	Details
		User	2	00:01:17	Details
		User	2	00:00:42	Details
		User	4	00:00:00	Details
		User	6	01:15:46	Details
		User	1	00:12:51	Details
		User	11	00:57:42	Details
		User	7	00:18:04	Details
		User	4	00:49:48	Details



測量学Ⅱ 2015年前期 (WEBCLASS導入前)

得点分布

区分	人数
無し	0
0~19	11
20~39	1
40~59	5
60~69	15
70~79	15
80~89	2
90~100	3

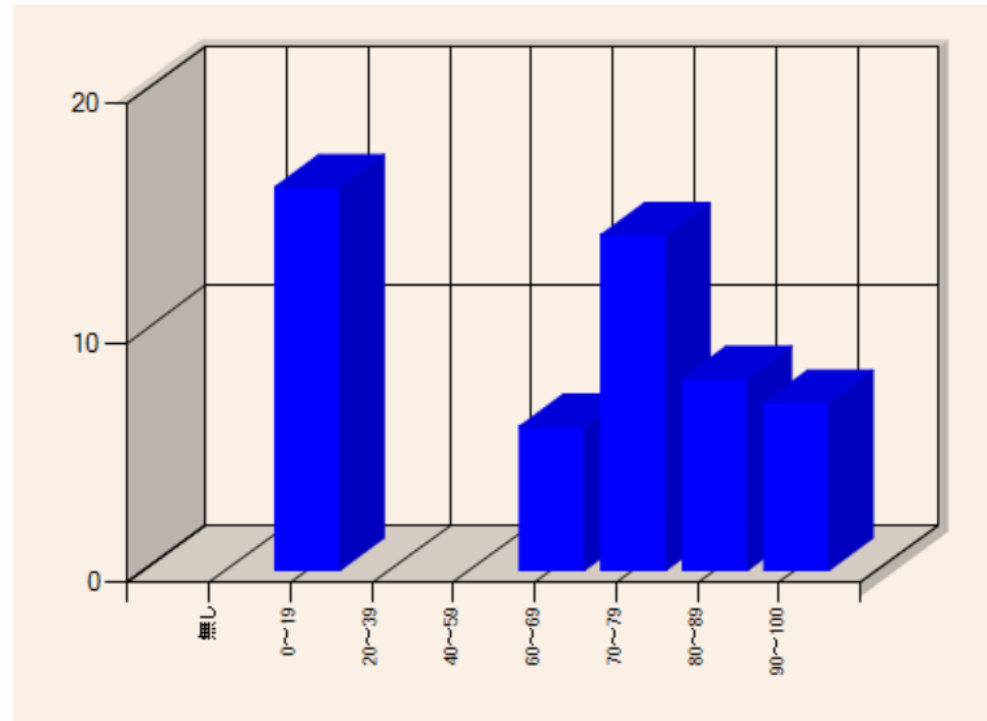


履修者総数 52名 合格率 67%
期末試験不受験者 11名
平均点 68点
期末受験者で不可の数 6名

測量学Ⅱ 2016年前期 (WEBCLASS導入後)

得点分布

区分	人数
無し	0
0~19	16
20~39	0
40~59	0
60~69	6
70~79	14
80~89	8
90~100	7

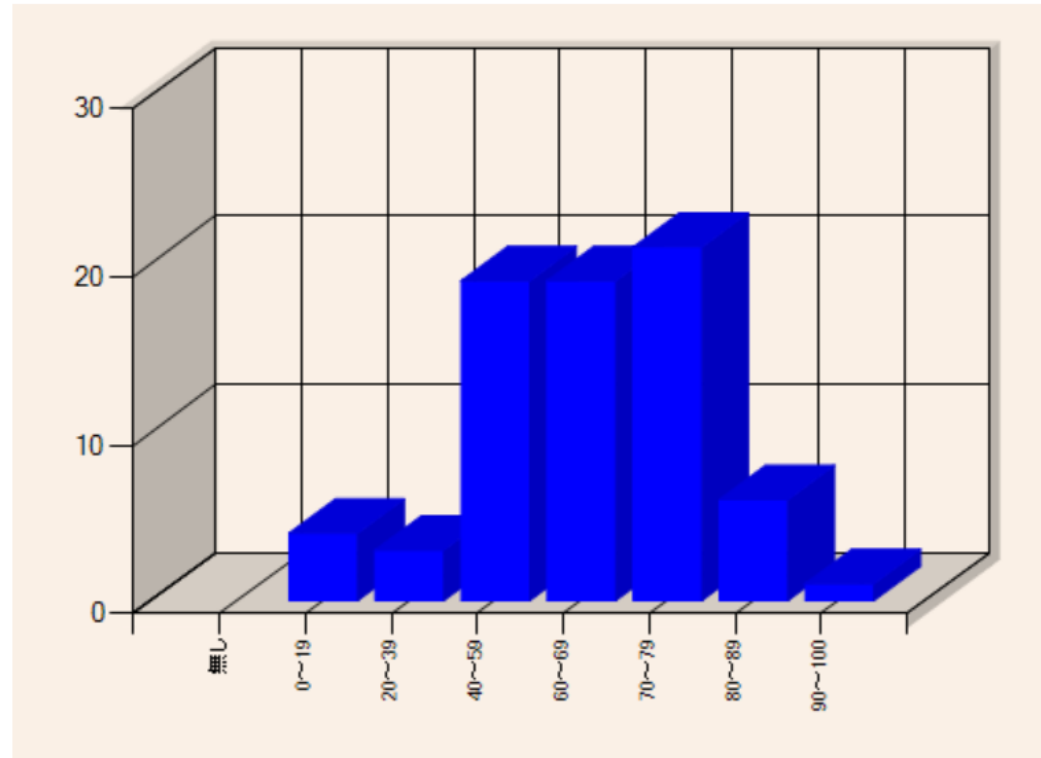


履修者総数 51名 合格率 69%
期末試験不受験者 16名
平均点 79点
期末受験者で不可の数 0名

測量学 I 2015後期(導入前)

得点分布

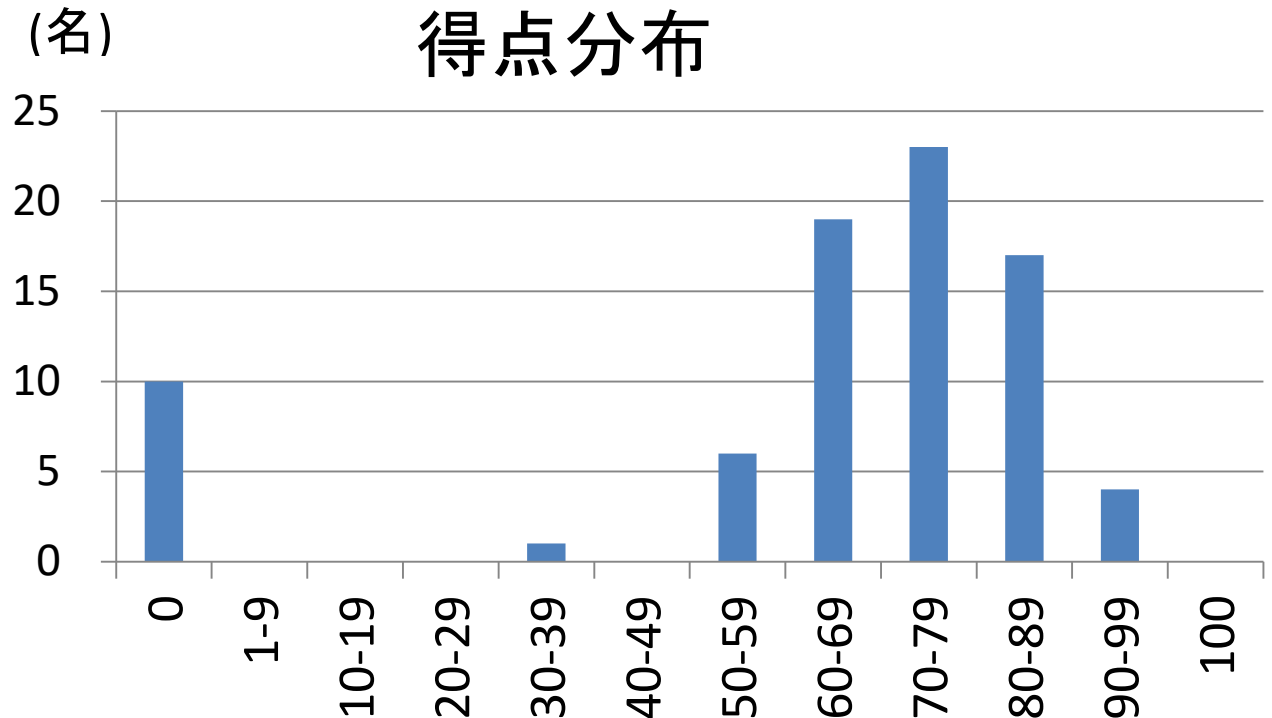
区分	人数
無し	0
0~19	4
20~39	3
40~59	19
60~69	19
70~79	21
80~89	6
90~100	1



履修者総数 73名 合格率 64%
期末試験不受験者 4名
平均点 65点
期末受験者で不可の数 22名

測量学 I 2016後期(導入後)

区分	人数
0	10
1-9	0
10-19	0
20-29	0
30-39	1
40-49	0
50-59	6
60-69	19
70-79	23
80-89	17
90-99	4
100	0



履修者総数 80名 合格率 79%
期末試験不受験者 10名
平均点 72点
期末受験者で不可の数 7名

WEBCLASSを利用する効果

- 先生の意見
 - 座学でも実習でも内容を理解している(勉強する)学生が増加
 - 期末試験不受験者が増加した半面、期末試験で不合格になる者が減少
 - 成績が良くなった
- 学生の意見
 - 問題を解くことによって教室で学んだことへの理解が深まる
 - 問題を解くためにテキストを読むようになった
 - いつでもどこでも教材を利用できる

Thank you for your attention